DOCUMENT RESUME

ED 040 695 24 HE 001 695

AUTHOR	Etzioni, Amitai; Milner, Murray
TITLE	Higher Education in an Active Society: A Policy Study. Final Report.
INSTITUTION	Bureau of Social Science Research, Inc., Washington, D.C.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
REPORT NO	BSSR-416
BUREAU NO	BR-8-0700
PUB DATE	Mar 70
CONTRACT	OEC-0-9-1807000-0765(010)
NOTE	344p.
EDRS PRICE	EDRS Price MF-$1.50 HC-$17.30
DESCRIPTORS	Admission Criteria, *Disadvantaged Youth, Educationally Disadvantaged, *Educational Opportunities, Educational Policy, *Federal Aid, Financial Support, *Higher Education, *Research, Teaching

ABSTRACT

This report is divided in four parts. Part I deals with the effects of federal aid to higher education on class inequality, racial inequality, inequality of opportunity, social mobility and the distribution of degrees. Part II proposes a strategy of cross-commitment to three developments: (1) a year of national service; (2) greater protection of teaching from research; and (3) new measures to advance equality of opportunity in higher education. Part III explores the relationship among: (1) selectivity; (2) standards; (3) balance between technical and liberal arts education; and (4) the organizational structure of colleges and universities. Specifically, the focus is on the conditions under which admission criteria can be changed to advance equality of opportunity with little loss in quality of education. Part IV discusses and proposes measures for increasing the separation of teaching from research. (AF)

BSSR: 416

BK 8-0700
PA-24

ED0 40695

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HIGHER EDUCATION IN AN ACTIVE SOCIETY:
A POLICY STUDY

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March 1970

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HE001 695

ACKNOWLEDGMENTS

The study was carried out, for the most part, under the auspices of the Bureau of Social Science Research. We are grateful to its Associates, staff, and, in particular, the Director, Robert T. Bower, for the facilities provided and for the supportive atmosphere. Richard Jones assisted in some of the computer work. Richard Remp, Roberto Kleinfeldt, Astrida Butners, and Ella Lasky served as Research Assistants for various periods of time. The American Council on Education provided us with some of the data on which this project is based.

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I. THE EFFECTS OF FEDERAL AID TO HIGHER EDUCATION ON CLASS INEQUALITY, RACIAL INEQUALITY, INEQUALITY OF OPPORTUNITY, SOCIAL MOBILITY AND THE DISTRIBUTION OF DEGREES

The initial purpose of this study was to estimate which forms of federal aid to higher education--student aid, grants to institutions, tax relief to parents, etc.--would contribute most to equality of opportunity. As the research progressed through its initial stages, doubts began to rise about the value of such a research focus. Gradually, more and more attention was devoted to examining some of the basic assumptions which are commonly made about the relationship between student aid, educational attainment and social stratification. This is the central concern of the first part of this report.

Because an attempt is made to raise questions about matters which are widely taken for granted, the study is necessarily exploratory. In turn the conclusions are quite tentative. Nonetheless we are convinced that the issues raised need to be considered in a more questioning manner than has frequently been the case.

The analysis which follows depends almost entirely on secondary analysis, that is, on the presentation or reanalysis of previously collected information. In most cases the data are from published sources. The majority of it is quantitative though some are qualitative in the extreme. Because the data have been drawn from a large number of sources their precision and reliability vary considerably. A full discussion of the methodology used in the collection of each piece of data is obviously impractical and unnecessary, but where limitations of methodology seem especially relevant to our substantive concerns an attempt has been made to note this. Where the data are reanalyzed for this study the techniques have been described in greater detail.

Section A analyzes the probable effects of expanded student aid--very broadly conceived--on class inequality and mobility. Section B focuses upon the probable effects of such aid on racial inequality. In Section C we consider two levels of "educational inflation"* and the implications of these processes for race and class inequality.

A. Class Inequality: The Effects of Socioeconomic Background on Achievement and the Consequences of Student Aid and Increased Levels of Education

1. Preliminary Considerations

a. Introduction.--Equality of opportunity is clearly a primary concern in the current debate over what form future federal aid to higher education should take. It was explicitly set forth as a primary goal in the recommendations of two blue-ribbon committees concerned with the issue of federal aid to higher education.

The Carnegie Commission on Higher Education, headed by Clark Kerr, entitled their report Quality and Equality, and stated on the first page:

> What the American nation needs and expects from higher education in the critical years just ahead can be summed up in two phrases: quality of result and equality of access. . . . The nation's campuses must

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*A full explanation of this concept will have to wait until later, but in essence it involves an expansion of the number of individuals who attain any specified level of educational certification, e.g., a B.A. degree, and a consequent decrease in the amount of social value or status attributed to that degree. One means of inflation is to lower the academic requirements for the given degree.

> act energetically and even aggressively to open up new channels to equality of educational opportunity (see Carnegie Commission on Higher Education, 1968:1).

In response to President Johnson's Education Message of February, 1968, the Department of Health, Education and Welfare created an advisory panel chaired by Alice Rivlin which produced a report entitled Toward A Long-Range Plan for Federal Financial Support for Higher Education (Washington: U. S. Government Printing Office, 1969). To quote former HEW Secretary Wilbur Cohen's cover letter:

> The report concludes that Federal aid to higher education in the future should emphasize two major national commitments: It should promote equality of opportunity by ensuring that all able students can afford to go on past secondary education, and that institutions are able to accommodate them. It should strengthen graduate education and research. . . .

In terms of social science, "equality of opportunity" may be viewed as referring to certain patterns of social mobility. Social mobility may--but does not necessarily--influence the degree of inequality and inequality of opportunity* present in the societal stratification structure. Therefore the question we are asking is how federal aid to higher education will affect social mobility and whether such influences will in turn have consequences for inequality and inequality of opportunity. It is our thesis

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*The term "inequality" is commonly used in sociological discussions of stratification. On the other hand the phrase "equality of opportunity" is more common when the discussion focuses on the differences in people's life chances to achieve various levels of status. We are interested in the effects that federal aid might have on both of these variables and consequently frequently mention them together. Yet it seems awkward to talk about the effects of some factor on "inequality and equality of opportunity." Consequently, when these two concepts are discussed together we will generally refer to "inequality and inequality of opportunity." This terminology not only has the advantage of making the two terms phonetically parallel, but it suggests that the realistic policy goal is some reduction in inequality and inequality of opportunity rather than the attainment of complete equality. In some cases we will use the terms "equality and "equality of opportunity" because of stylistic considerations.

that while some forms of aid will have greater effects than others, none of the currently conceived types of assistance is likely to produce significant change in the stability of either the mobility rates or patterns of inequality--a stability that has been maintained over the last twenty-five years. Section A attempts to review the social theory and empirical evidence that leads to this conclusion.

b. Stratification, inequality, mobility and inequality of opportunity.--Social stratification refers to those forms of social differentiation within a social unit in which the distinctions are ranked in a hierarchy along some socially significant dimension. Some category of individuals[*] is considered in some sense better or higher than some other category. The dimension may refer to either relatively "objective" factors such as wealth, or more subjective matters such as the esteem of other members of the social unit. There is a vast literature discussing how such differentiations should be conceptualized and measured.[*]

In this study stratification will be conceptualized and operationalized in terms of the "objective" indicators of socioeconomic status (SES): education, occupation, and income (as a proxy for wealth). In part, this conceptual emphasis is used for methodological convenience. We are interested in the impact of federal aid to higher education* on the national stratification structure (as contrasted to local community structure), and the overwhelming majority of studies and data relevant to this question are based on such indicators. Moreover, we are interested in patterns of social mobility, and mobility studies rely almost exclusively on objective indicators.

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[*] Collectivities and organizations are also stratified. For a discussion of the relationship between stratification categories, collectivities, and organizations, see Etzioni, 1968: 97f.

[*] For a survey of these discussions, see Reissman, 1957, and Barber, 1957.

But in addition to methodological convenience there is also a theoretical reason why objective indicators are appropriate to our needs: the focus of this research is primarily on the problem of distributive justice rather than social segmentation. That is, we are focusing on the stratification system primarily as an opportunity and reward structure rather than as a system of hierarchically-ranked interacting collectivities. Consequently, the interest is primarily in the objective goods, services and status positions that individuals receive rather than their subjective sense of identity with or alienation from particular societal subgroups, or the extent to which such subgroups have developed class consciousness and become organized collectivities. This focus is not to deny either the

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*Since the dependent variable of this study is inequality and inequality of opportunity, we are interested only in those forms of federal aid to higher education which are likely to have an effect on these variables. Consequently when we refer to "federal aid" (and similar phrases) we mean (1) federal support for student aid very broadly conceived: scholarships, loans, grants to institutions to reduce tuition, subsidized student housing and services, tax relief, etc., and (2) various kinds of recruitment and counseling programs aimed at assisting and encouraging lower class and minority group members to obtain a college education. Unless specifically indicated, "federal aid" will not mean other possible kinds of federal support to higher education, e.g., research funds, library grants, etc. For stylistic reasons we will use "federal aid" and "student aid" more or less interchangeable, but their specific meaning in the context should be kept in mind. These matters will be discussed again in greater detail in Chapter 3.

existence or importance of such social segmentation in our society nor to assign causal priority to objective factors. Rather it is a matter of analytical emphasis which is in turn related to the policy issues raised by attempts to reduce inequality of opportunity.

Now it is necessary to discuss the relationship between the concepts of inequality, inequality of opportunity and social mobility. Inequality can be measured on either an absolute or relative scale, e.g., percentage of the population making more and less than $10,000 or the percentage of the national income going to the top quarter of the population. In either case, various degrees of inequality are probably best conceptualized in terms of a frequency distribution of some indicator of rank, e.g., years of schooling, and, more specifically, a Lorenz curve.* When this is done the degree of inequality refers to the range and the shape of the distribution. Since conceptualizing inequality in this manner is a standard procedure in most social sciences, no greater elaboration is required here.

Inequality of opportunity can be conceptualized as a correlation between an individual's ascriptive status and his achieved status. To the extent that there is not perfect equality of opportunity,* an individual's achieved statuses are in some degree influenced or determined by his ascribed statuses. In this context the ascriptive attributes are the socioeconomic characteristics or statuses (SES) of one's parents, primarily their education, occupation and income, or an index combining these types of indicators.

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*For a discussion of Lorenz curves, see Samuelson, 1967: 109-111. A Lorenz curve is most commonly used in discussing income distribution, but it is appropriate for analyzing the distribution along any continuous variable.

*That is, where there is no correlation between ascribed and achieved statuses or, to put it another way, when an individual's life chances are not influenced by his socioeconomic background.

It is important to make clear that no necessary relationship exists between the degree of inequality and the degree of inequality of opportunity.* Complete equality of opportunity is logically possible within a stratification system that has a high degree of inequality, e.g., a tall, narrow pyramid. Inversely, systems with low degrees of inequality could logically be rigid caste systems with the children automatically receiving the status of their parents. Empirically there does tend to be a direct relationship between inequality and inequality of opportunity: societies with high degrees of inequality tend to have a high degree of inequality of opportunity. The precise strength and nature of the empirical relationship is determined by the rates and types of social mobility.

Social mobility refers to upward or downward changes in status by individuals or families.* We are concerned primarily with intergenerational changes. The amount and type of intergenerational mobility required to perfect equality of opportunity depends on the initial degree of inequality and the overall trends of inequality during any given generation, i.e., the initial shape and absolute level of the distribution and changes in the shape and level.

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*Except in the limiting case of perfect equality, in which case there is necessarily perfect equality of opportunity.

*Horizontal movement is also possible, but here we are concerned only with vertical mobility. It is also possible for various kinds of collectivities to experience mobility but our unit of measurement at this point is the individual. As with inequality, mobility can be measured in either absolute or relative terms. A son may be upwardly mobile in absolute terms because his annual income averages $6,000 over his lifetime compared to his father's average of $5,000 (both in constant dollars). But he may at the same time be downwardly mobile in relative terms if $5,000 fell above the median during most of the father's career, while $6,000 fell below the median during most of the son's working career.

If the shape of the distribution is constant, perfect equality of opportunity requires that upward and downward mobility be equal in relative terms. That is, the sons of those from the upper classes must lose social status relative to their peers at the same rate that status is gained by those from the lower classes. This does not necessarily mean that the sons must lose in absolute measure of status. If the overall absolute level of the stratification system is being raised--the levels of income, occupations, and education are increasing--the sons of upper class background may keep or even increase their absolute levels, but to the extent that there is perfect equality of opportunity, most of them will have a lower status relative to their peers than their fathers had. If both the shape and the absolute level of the distribution are constant then the uppers will lose both absolute and relative status in the same proportion to that gained by the lowers.

If the shape of the distribution is changing, then it is possible for temporary imbalances to exist in upward and downward mobility in terms of both relative and absolute measures of status. Upward rates measured in relative terms may exceed downward rates if the shape of the distribution is becoming flatter, i.e., more equal. But eventually such a trend would produce a completely flat, equal distribution.

Up to this point we have talked as if the shape of the distribution set the limits for the types of mobility that could occur. This has been a heuristic devise, however, to aid in explaining the relationship between mobility and inequality of opportunity. Empirically, the connections are quite the opposite: the shape of the stratification structure is largely a function of the past patterns of mobility. The shape remains constant if upward rates of those on the bottom just match the downward rates of those on the top, in relative terms. The shape changes to the extent that this condition is not met.

What is important to emphasize is that increasing the rates of upward mobility of those on the bottom in absolute terms does not necessarily have any effect on either inequality or inequality of opportunity.*

For example, in the United States a great majority of sons will be upwardly mobile in the sense that they will have more education and a higher income than their father, simply because the average level of education and income has increased dramatically. However, the question that the concept of inequality of opportunity raises is not whether sons are better educated than their fathers, but whether the sons of poorly educated fathers tend to have significantly less education (or occupational status, or wealth) than the sons of well-educated fathers. As Clark (1962: 77) indicates, there is an important distinction between raising the average level of education or increasing the number of individuals who enter college, and equalizing the educational attainment of those with equal ability--without regard to "irrelevant" criteria such as family socioeconomic status, race, or place of residence. To the extent that such absolute increases of the lower class are matched by the upper class, the existing structures of inequality and inequality of opportunity remain unchanged.

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*That is, it has no necessary effect insofar as reducing inequality and/or inequality of opportunity are conceptualized in terms of moving toward, i.e., more closely approximating, models of perfect equality (e.g., a "straight" Lorenz curve) and perfect equality of opporutnity (e.g., a model of statistical independence). This is not to say that the "perfect models" must be reached or even closely approximated, only that they must in some degree be more closely approximated before it is meaningful to talk about reductions in inequality and inequality of opportunity.

c. Preliminary sketch of the argument and an overview.--The chain of causation linking various forms of student aid with inequality and inequality of opportunity in the societal stratification system is a very long and complex one. Taken by themselves, any one of the links in this causal chain involves significant relationships, e.g., the relation between the availability of student aid and lower class enrollment in college, between educational attainment and occupational attainment, etc. While many of these linkages are "significant," in no case do the available data indicate that any factor accounts for more than about 60 per cent of the variance in the next factor in the chain. In most cases the strength of the relationship is much weaker. For example, a recent analysis of project TALENT data correlated thirty-eight personal and environmental factors with college attendance. The multiple correlation coefficients for all thirty-eight variables was .674 for males and .733 for females. For males, only five factors had a zero-order correlation of .30 or more (the highest being .549). The partial coefficients were of course much lower. The coefficients for the females were in some cases slightly higher. When these coefficients are squared we see that any causal connections which exist are at best quite loose (see Folger, et al., forthcoming). While other studies have sometimes found stronger relationships between similar sets of variables, these figures are not unrepresentative.

A hypothetical example may help to clarify this line of argument. Let us assume a causal model involving five variables linked in sequence.

Further assume that each linkage is a linear relationship with a regression coefficient of .50. Student aid counteracts the effects of parent's SES, parent's SES influences educational attainment, educational attainment influences occupational attainment, occupational attainment influences income. In such a model the coefficient for the effect of multiple links is equal to the product of the individual coefficients. For example the regression coefficient linking aid and education is the product of the coefficient linking aid and SES (.50) and SES and education (.50), i.e., .50 x .50 = .25. The coefficient linking aid and income is .065, i.e., .50 x .50 x .50 x .50. This means, for example, that if the financial resources available for college were completely equalized the income distribution would be 6.5 per cent more equal.* Of course a 6.5 per cent increase in income equality is not irrelevant--though it is a quite small increment. But it must be taken into account that even this small increment in equality of income was attained under what are probably unduly optimistic assumptions: that resources available to attend college are completely equal and that the coefficients would be .50. Even if the coefficients were raised to .60, income equality would be affected by about 10 per cent, while coefficients of .70--which are totally unrealistic--would equalize things about 25 per cent.

Consequently, even relatively large inputs at one end of the chain tend to be largely diluted if not "washed out" by the time their effects reach the other end. Trying to bring about changes in the societal stratification structure through traditional forms of student aid is analogous to trying to move a very heavy rock which is some distance away from you by pushing on it with a very long and limber rod; it is possible to bring some force to bear on the rock but the amount of movement that is likely to occur is negligible.

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*That is, the area under a Lorenz curve would be 6.5 per cent larger.

Our conclusions about the probable effects of aid on inequality vary from earlier analyses primarily because of two factors. First, other recent studies oriented toward higher education policy* have tended to look primarily at short run effects (or more accurately, next-link effects), e.g., how many additional lower class youth would enroll in college as a result of increased federal aid, rather than more distant consequences such as intergenerational mobility and the distribution of wealth and income. The second, less important factor has to do with how the variables used to measure inequality and equality of opportunity are conceptualized. In past studies variables have often necessarily been conceptualized in an imprecise manner. For example, the level of educational attainment is often measured in terms of the number of years of school completed. Such a method makes four years at Podunk College with a major in physical education and a "C" average equal to four years at MIT with a degree in electrical engineering and a "A" average. We would suggest that an individual with the latter training is likely to have a significantly different life experience than one with the former. Our conceptualizations and measurements are no better, but we have attempted to be sensitive to the probable consequences of such forms of measurement, and to take this into account in drawing our conclusion.

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*For example the "Kerr Commission," the "Rivlin Committee" and the work of Joseph Froomkin. For references to the first two see the citations on pages 1-2 and 1-3. For Froomkin's work see U. S. Office of Education, 1968, and The Chronicle of Higher Education, 1969.

With respect to which forms of aid are most effective as measured by their more immediate consequences, we have attempted to rank traditional alternative forms of aid with respect to two factors: (1) the way in which they will distribute financial resources among the various SES groups, and (2) the extent to which they might encourage or discourage motivation--motivation for upward mobility in general and educational attainment in particular. We also consider briefly the probably independent impact of counseling and recruitment programs (as distinguished from "financial aid" per se) on college enrollment and attainment.

The discussion is presented more or less in the order of causal sequence through which federal aid would presumably operate. First, we focus on the current state of inequality of opportunity, i.e., the effect of socioeconomic status on the various stages and processes through which the college student passes. Secondly, we analyze the consequences. Finally we consider how these two sets of phenomena--the "drag" of SES and the "push" of publicly financed schooling--have interacted and influenced the stratification system over the last forty or so years.

2. Inequality of Opportunity in Higher Education: The Influence of Socioeconomic Status

The first task is to review the nature of the inequalities of opportunity that currently exist within the higher education system of the United States. More specifically, we will seek to determine how SES influences: (1) college attendance, (2) progress in college, (3) the type and quality of the college attended, (4) career choices as they are related to what one "majors in," and (5) enrollment and progress in graduate school.

a. SES and initial enrollment.--There has never been much question in the past about whether SES affects one's chances of attending college; clearly those from upper SES groups were more likely to enroll. This is still true.

While there are no regularly and systematically collected statistics showing the SES backgrounds of those who do and do not enroll in college, there are three recent bodies of data which permit a reasonable estimate of the current effects of social class differences. First, it is possible to compare the income distribution of the parents of 1968 college freshmen with the 1967 income distribution of those families who are headed by individuals 45-54 years old--the age cohort most likely to have college age children (Table 2.1). As could be expected, lower income groups tend to be under-represented among college freshmen and upper income groups over-represented, though among the general population the $10,000-$14,999 category is slightly larger.

TABLE 2.1

FAMILIES LIKELY TO HAVE COLLEGE AGE CHILDREN AND FAMILIES WITH COLLEGE FRESHMEN, BY INCOME: FALL 1968
(In Percentages)

Income Level	All Families With Heads 45-54	Families With College Freshmen
Under $4,000	10.4	6.3
4,000 - 5,999	11.2	10.3
6,000 - 7,999	15.6	15.5
8,000 - 9,999	15.2	16.9
10,000 - 14,999	28.4	27.2
15,000 - 24,999	15.2	16.5
$25,000 and over	4.1	7.3
Index of dissimilarity	--	6.3

*1967 family income.

Source: American Council on Education, 1968, and U.S. Bureau of Census, 1969a.

A second estimate of the impact of income on enrollment is provided by the 1968 school enrollment data of the Census Bureau's Current Population Survey (1969b) shown in Table 2.2. This table deals with the number of families that have dependent* children, 18-24, and shows the percentage of such families that have children enrolled in college. Obviously, differences in income are strongly correlated with chances of attending college: families from the top income group are nearly four times as likely to have dependents enrolled in college than those from the lowest income group.

TABLE 2.2

FAMILIES WITH ONE OR MORE DEPENDENTS 18-24 YEARS OLD ENROLLED
IN COLLEGE AS PER CENT OF ALL FAMILIES WITH ONE
OR MORE DEPENDENTS 18-24 YEARS OLD,
BY INCOME: MARCH 1968

Income Level	Per cent of Families With Children in College
Under $3,000	16.0
3,000 - 4,999	22.8
5,000 - 7,499	33.2
7,500 - 9,999	41.3
10,000 - 14,999	49.7
$15,000 and over	63.4

Source: U. S. Bureau of the Census, 1969b.

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*That is, unmarried and living with their parents or away at college.

The educational level of the head of the household has an effect similar to that of family income. Table 2.3 shows the percentage of white dependent family members 34 years old or younger who are high school graduates and have at some time been enrolled in college. It appears that the educational level of the family one grows up in is at least as important as their income level, since family income and educational level are as a rule not perfectly correlated.

TABLE 2.3

WHITE DEPENDENT FAMILY MEMBERS 34 YEARS OLD OR YOUNGER WHO ARE HIGH SCHOOL GRADUATES, WHO ARE NOW OR HAVE BEEN ENROLLED IN COLLEGE, BY THE LEVEL OF EDUCATION OF THE HEAD OF THEIR PRIMARY FAMILY: MARCH 1968

Educational Level of Head of Family	Per cent Who Have Been or Are Currently Enrolled in College
Grade school	
1-4	37.8
5-7	30.5
8	43.2
High school	
1-3	47.1
4	65.3
College	
1-3	82.9
4 or more	88.3
Total (all levels)	61.9

Source: U. S. Bureau of the Census, 1969b.

One must keep in mind that most of the preceding figures significantly understate the effect of SES on educational attainment, because they focus primarily on the transition from high school to college. Children from lower SES families drop out of high school at significantly higher rates than middle and upper class children. Data showing the percentage of the age cohort by socioeconomic background that enroll in college would be necessary to see the full effect of social class. Unfortunately, such data are not available.

However, there is a study of 1965 high school seniors available which shows the percentage of these seniors who graduated from high school and the percentage that had entered college by February 1967, controlled by family SES characteristics. These figures are shown in Table 2.4. It allows us to see the effects of SES on both completing the last year of high school and entering college and to compare this with the figures for high school graduates. As would be expected, lower SES groups have higher attrition rates at both points--and possibly even more so at earlier stages of high school--producing a significant cumulative effect. While obviously federal aid to higher education cannot alleviate inequalities at lower levels in the school system, it is important to keep in mind the full lifetime effect that SES has on one's chances of attending college.

While Tables 2.1 to 2.4 present recently collected data, they do not control for the effects of intellectual ability. It could be argued that the reason upper SES groups have higher enrollment rates is not due to the ascriptive aspects of class background, but primarily because these groups are made up of smarter people. However, when we look at the enrollment rates of cohorts of high school graduates controlled for both SES and

TABLE 2.4

ATTRITION OF HIGH SCHOOL SENIORS; PERCENTAGES OF THOSE STARTING THEIR SENIOR YEAR IN HIGH SCHOOL WHO GRADUATED AND ENTERED COLLEGE AS COMPARED WITH THOSE GRADUATING FROM HIGH SCHOOL WHO ENTERED COLLEGE, BY FATHER'S LEVEL OF EDUCATION AND OCCUPATION AND FAMILY INCOME: SENIORS OF 1965

	All Seniors		Graduates	Seniors Who Entered College	Graduates Who Entered College
	N	%			
Total	2,833	100.0	92.2	43.2	46.9
Father's Education Level					
College 4 years and over	296	100.0	94.1	77.7	82.4
College 1-3	306	100.0	96.5	60.1	62.5
High school 4	746	100.0	96.0	51.5	53.6
Elementary 8 to high school 3	862	100.0	94.9	33.2	35.0
Less than 8 years	291	100.0	85.4	18.9	22.2
Not reported	331	100.0	77.0	25.7	33.3
Father's Occupation					
White collar	1,029	100.0	94.3	60.4	64.1
Manual or service	1,371	100.0	91.0	33.6	36.9
Farm worker	162	100.0	94.2	34.0	36.1
Unemployed, or not in labor force	237	100.0	88.7	27.8	31.2
Not reported	34	100.0	*	--	*
Family Income					
$15,000 and over	169	100.0	94.7	82.2	86.7
$10,000 - $14,999	508	100.0	93.7	57.5	61.3
$7,500 - $9,999	521	100.0	94.1	48.0	51.0
$6,000 - $7,499	393	100.0	93.3	38.4	41.1
$4,000 - $5,999	524	100.0	93.1	34.4	36.9
$3,000 - $3,999	192	100.0	87.0	28.1	32.3
Less than $3,000	309	100.0	86.8	17.2	19.8
Not reported	218	100.0	90.2	18.6	54.1

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*Base less than 100,000.

Source: U. S. Bureau of the Census, 1969c.

intellectual ability we see that differences in ability do not fully explain the effects of SES. In 1962 Project TALENT did a follow-up study of a national sample of individuals who were first tested when in the eleventh grade in 1960. Table 2.5 (Project TALENT, 1966) shows the percentage of these students who enrolled in college in the year following graduation, controlled by sex, family SES and intellectual ability.

TABLE 2.5

PERCENTAGE OF STUDENTS ENTERING COLLEGE
OR JUNIOR COLLEGE CONTROLLED
BY SEX, SES, AND ABILITY

Ability Quartile	SES Quartile			
	Low	2	3	High
		Males		
Low	10	17	21	38
2	19	22	38	52
3	31	45	55	76
High	61	77	81	92
		Females		
Low	8	13	9	37
2	13	13	26	43
3	26	32	44	72
High	42	75	75	87

Source: Project TALENT, 1966.

These percentages can also be considered probabilities; each percentage figure represents the probability that a high school graduate of that sex, SES, and ability would enroll in college or junior college one year after high school graduation.

This table shows that even when ability and sex are controlled, SES still has a significant influence on one's chances of attending college. When each ability quartile (rows) is examined separately, the top SES groups tend to have an enrollment rate at least 30 per cent and sometimes 40 per cent higher than the lowest SES group. On the other hand, ability has an even greater influence on one's chances than SES, especially for boys.

Sewell and Shah (1967) studied a random sample of 1957 Wisconsin high school graduates. They found SES to have a greater influence on girls than the TALENT data indicated, stronger than the influence of ability. Otherwise the findings are essentially the same: "On the whole, the relative effect of socioeconomic status is greater than is the effect of intelligence for females, while the relative effect of intelligence is greater than the effect of socioeconomic status for the males. This is true whether effect parameters or path coefficients are used to measure the effects (Sewell and Shah, 1967: 22-23)." Table 2.6 presents their findings in detail.

Berdie's study (1965) of 1961 high school graduates in Minnesota found that while the effects of SES were still significant, it had less influence on college attendance than had been the case when a similar study was conducted in the state in 1950. Attendance was related more to academic ability and less to SES.

Another fairly consistent finding is that the relationship between SES and academic progress is less significant for those of superior ability.

TABLE 2.6

PERCENTAGE WHO ATTENDED COLLEGE, BY SOCIOECONOMIC STATUS, INTELLIGENCE, AND SEX*

Socioeconomic Status Levels	Intelligence Levels				Total
	Low	Lower Middle	Upper Middle	High	
			Males		
Low	6.3 (363)	16.5 (267)	28.0 (193)	52.4 (149)	20.5 (972)
Lower Middle	11.7 (300)	27.2 (324)	42.6 (275)	58.9 (253)	33.8 (1,152)
Upper Middle	18.3 (273)	34.3 (277)	51.3 (316)	72.0 (289)	44.6 (1,155)
High	38.8 (134)	60.8 (232)	73.2 (299)	90.7 (442)	73.4 (1,107)
Total	15.0 (1,070)	33.5 (1,100)	51.0 (1,083)	73.8 (1,133)	43.7 (4,386)
			Females		
Low	3.7 (411)	6.3 (316)	8.9 (236)	27.5 (138)	8.5 (1,101)
Lower Middle	9.3 (335)	20.2 (342)	24.1 (291)	36.7 (226)	21.2 (1,194)
Upper Middle	16.0 (250)	25.6 (342)	31.0 (332)	48.1 (289)	30.5 (1,195)
High	33.3 (126)	44.4 (223)	67.0 (324)	76.4 (458)	62.6 (1,131)
Total	11.4 (1,122)	22.5 (1,205)	34.7 (1,183)	54.9 (1,111)	30.7 (4,621)

*All x^{2}'s for each column and row in this table are significant beyond the 0.05 level.

Effect parameters: Males: Socioeconomic Status .134
Females: Socioeconomic Status .146

Males: Intelligence .166
Females: Intelligence .105

Source: Sewell and Shah, 1967.

Wolfle found this nearly fifteen years ago (Halsey, et al., 1961: 232), and the same finding is demonstrated in the Project TALENT data in Table 2.5 (see figures below dotted line). More specifically, those who are in the top ability quartile have a very high probability of going on to college unless they are in the lowest SES group. On the other hand, the positive effect of high SES on college attendance is especially strong for those from the top SES quartile and the third ability quartile. This is, they enroll at a considerably higher rate than could be expected on the basis of ability alone. The Sewell and Shah data show approximately the same pattern (Table 2.6). In sum, if a person is really smart, he has a good chance of going to college unless he is on the bottom in terms of SES, while if he is well-to-do he still needs to be above average in terms of ability. Or to turn the evaluative emphasis around, if a person is poor, his chances are significantly reduced even if he is very smart, while if he is rich, chances are very good as long as he is of at least average ability.

The Human Resources Commission (Folger, et al., forthcoming) have recently done a correlation analysis of 38 variables grouped as ten factors which are believed to influence college attendance, using the Project TALENT cohort data. This makes it possible to quantify more precisely the relative influence of SES and intellectual ability. The multiple correlation coefficient for five measures of ability is .531 for males and .533 for females. The multiple-partial correlation coefficients--i.e., the cumulative effect of the five measures of ability when 33 other factors are controlled--are .279 and .302. The multiple coefficients for five measures of SES* were .366 for males and .438 for females, while the multiple-partial coefficients are .133 and .164. The most impressive fact is how little of the variance is accounted for by either set of variables. Ability accounts for about six to nine per cent of the variance when the other factors are partialled out, while SES accounts for about two or three per cent. But it must be kept in mind that these two factors have a considerably stronger effect than any of the other factors.*

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*The measures of SES do not include racial or ethnic characteristics. These are measured separately and controlled in the partial coefficients.

The effect parameters calculated by Sewell and Shah (1966) and shown at the bottom on Table 2.6 indicate about the same effect for SES, but the effect of ability is weaker than in the TALENT data. When compared to the impact of other factors the influence of SES is significant, but in terms of explained variance the relationship is quite weak.

In summary, SES can be said to have a definite impact on an individual's chances of attending college whether SES is measured in terms of income, occupation or education. The relationship holds even when ability and a wide variety of other factors are controlled. Its effect is less for those of high ability and for males. However, even for men in the top ability quartile the data available show about a thirty per cent differential in the college attendance rates of high school graduates from the bottom and top SES quartile. Now let us turn to the question of whether SES continues to affect academic achievement after the initial barrier of college enrollment has been overcome.

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*An exception is the factor labeled "college commitment variables." However, most of the variance accounted for by this factor is due to the correlation between high school plans for college and college attendance. It is hardly surprising to find a close relationship since the causal linkage is so "short" it borders on the tautological. But even here only ten per cent of the variance is explained.

b. SES and progress in college.--A classic study of the early 1950's concluded that the primary effects of SES on the attainment of higher education took place at the point of entry into college. It was claimed that after students had enrolled in college their progress was determined primarily by academic ability (Wolfle, in Halsey, Floud, and Anderson, 1961: 232).

Studies conducted approximately eight to ten years later contradict these findings and show that SES continued to have a definite impact on educational attainment. Percentages of college enrollees who actually graduated, controlled by sex, SES, and ability, are presented for the Wisconsin and Project TALENT cohorts in Tables 2.7 and 2.8 respectively. For both cohorts we see that while the effects of SES are less than they were at initial enrollment, they still play a definite role. For example, Wisconsin high ability males in the top SES group are almost twice as likely to complete college as those with the same ability but from the lowest SES group. The relationship in the TALENT cohort seems weaker. The difference may be due either to the more complete follow-up procedures of the Wisconsin study or to the larger time period covered (eight years as compared to five).* Table 2.9 shows the various "measures of effect" from the Wisconsin and TALENT data. Not surprisingly, the relationships are consistently significant relative to other findings in social science, but only a relatively small proportion of the total variance is accounted for.

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*It may be that high SES but low ability students tend to have academic trouble and take longer than five years to complete their degree. Lower SES students probably do not have the resources and are under less social pressure to persist. (See Eckland, 1964, for a discussion of this "persistence hypothesis.")

TABLE 2.7

PERCENTAGE* OF WISCONSIN COHORT WHO HAD GRADUATED FROM COLLEGE EIGHT YEARS AFTER HIGH SCHOOL GRADUATION, BY SOCIOECONOMIC STATUS, INTELLIGENCE, AND SEX

Socioeconomic Status Levels	Intelligence Levels				Total
	Low	Lower Middle	Upper Middle	High	
Males					
Low	4.4 (23)	47.7** (44)	38.9 (54)	38.5** (78)	36.7** (199)
Lower middle	20.0 (35)	27.3 (88)	39.3 (117)	58.4 (149)	42.2 (389)
Upper middle	24.0 (50)	28.4 (95)	47.5 (162)	64.9 (208)	48.7 (515)
High	26.9 (52)	38.3 (141)	52.5 (219)	70.6 (401)	57.3 (813)
Total % N	21.3 (160)	34.2 (368)	46.9 (552)	64.0 (836)	49.8 (1,916)
Females					
Low	6.7 (15)	20.0 (20)	28.6** (21)	50.0** (38)	31.9** (94)
Lower middle	9.7 (31)	26.1 (69)	37.1 (70)	56.6 (83)	37.2 (253)
Upper middle	15.0 (40)	36.1 (83)	38.8 (103)	51.8 (139)	40.5 (363)
High	23.8 (42)	34.3 (99)	54.4 (217)	66.9 (350)	55.9 (708)
Total % N	15.6 (128)	31.7 (271)	46.2 (411)	61.0 (610)	47.0 (1,420)

*Percentage based on number who attended college, not the total cohort of 1957 high school graduates.

**x2 significant beyond 0.05 level for this column.

Effect parameters: Males: Socioeconomic Status: .049
Females: Socioeconomic Status: .061

Males: Intelligence: .131
Females: Intelligence: .142

Source: Sewell and Shah, 1967.

TABLE 2.8

PERCENTAGE OF COLLEGE ENTRANTS GRADUATING, BY SEX, ABILITY, AND SES: PROJECT TALENT COHORT, FIVE YEAR FOLLOW-UP

SES Level and Sex	Intelligence Level			
	Middle	High Middle	High	Total
Males				
Low	30	N.A.*	57	29
Low Middle	40	35	47	30
Middle	35	46	60	40
High Middle	39	55	63	50
High	48	51	70	55
Females				
Low	N.A.	N.A.	N.A.	40
Low Middle	27	48	62	37
Middle	36	41	57	43
High Middle	40	38	59	45
High	44	55	78	57

*Not available.

Source: Folger, et al., (forthcoming.)

TABLE 2.9
"MEASURES OF EFFECT" OF SES, AND ABILITY ON COLLEGE GRADUATION, BY SEX

	SES		Ability	
	Male	Female	Male	Female
Wisconsin data				
Path coefficient Total cohort	.24	.29	.33	.24
College enrollees	.13	.13	.28	.27
Effect parameters Total cohort	.081	.077	.123	.083
College enrollees	.049	.061	.131	.142
Project TALENT data				
Correlation coefficient (multiple)	.183	.104	.231	.182
Partial coefficients (controlling 33 other factors)	.120	.059	.138	.105

Source: Sewell and Shah (1967); Folger, et al. (forthcoming).

Some recent data for high school graduates under 34 and not in school also indicate the effect of SES on progress in college. The restricted nature of this population makes it impossible to tell the extent to which it represents the total population, though there are no obvious reasons why the data should be systematically biased.* For the population then enrolled in college or graduate school it is not representative of a cohort of high school graduates. The population is likely to consist primarily of three groups: (1) all high school graduates from approximately age 17-34 who have not and will not go to college, (2) those who have completed their college training--primarily those past "college age," and (3) a few individuals who are in the process of obtaining a college education, but for some reason were not enrolled in October 1968.

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*The population covered includes those who in October 1968 were high school graduates, but were (1) 34 years olds or younger, and (2) not currently enrolled in school. Since it excludes all those under 35 who were

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covered, there is a definite tendency for progress through college to be related to SES. The relationship is weaker, however, for those from the lowest SES backgrounds. The results are shown in Table 2.10.

TABLE 2.10

COLLEGE EDUCATION OF HIGH SCHOOL GRADUATES
UNDER 35 YEARS OLD NOT CURRENTLY ENROLLED
IN SCHOOL: OCTOBER 1968
(In Percentages)

Education of Head of Family	No College	1-3 Years	4 or More Years
College			
4 or more	52.6	26.3	21.2
1-3	50.5	34.5	15.0
High School			
4	73.0	20.0	7.0
1-3	81.1	14.1	4.8
Elementary			
8	83.1	12.0	4.3
5-7	88.1	7.9	4.1
0-4	92.2	4.3	3.4
Total	75.6	17.2	7.2

Source: U. S. Bureau of the Census, 1969b.

In short, SES continued to influence educational attainment for those who have entered college, though its effects are weaker at this point than at the time of initial enrollment. Even when ability is controlled, graduation rates run from 20 to 60 per cent higher for those from the top SES categories than for those from the bottom ones. That is, the ratios between the graduation rates of the top and bottom SES categories (with the same ability) run between 1.2 and 1.6. Thus we conclude that socioeconomic background continues to be a significant influence on academic achievement.

c. SES and the type and status of college attended.--There are at least two reasons why the type and status of the college attended are important to our concerns. First, the quality and prestige of the college attended affects later occupational attainment or, at the very least, the chances of enrolling in graduate school.

Secondly, colleges which have high admission standards--and usually high prestige--have much lower attrition rates than the less selective institutions. Therefore, if SES is related to the type of college attended, SES is necessarily related to the chances of completing college, one of the findings in the preceding section. The type of college is one of the intervening variables which explains this relationship. We will now explore this intervening influence and then later examine how the type of college attended affects occupational attainment.

(1) Effect on attrition.--Data relevant to the relationship between SES and the selectivity or quality of the college attended can be derived from the American Council on Education's (1968a) National Norms for Entering Freshmen--Fall 1968. This report shows the percentages of 1968 freshmen whose parents fall in various income categories, and presents these data

separately for different types of institutions. It is generally held that junior colleges are less selective than four year colleges and the latter less selective than universities.* Therefore, Table 2.11 compares the

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*The National Norms. . . . also provides a check on this since they show the percentage of freshmen in each type of institution whose average high school grades were A, B, C, etc. The percentage of entering students whose high school grades were B+ or higher is used as a selectivity index for the three types of institutions.

TABLE 2.11

SES (PARENTAL INCOME) AND THE SELECTIVITY OF THE COLLEGE ATTENDED: FRESHMEN, FALL 1968

(In Percentages)

	Type of Institution		
	Junior Colleges	4-Year Colleges	Universities
Selectivity Index*	11	34	42
Under $4,000	7.4	7.1	4.0
$4,000 - $5,999	13.3	10.1	7.5
$6,000 - $7,999	19.2	15.1	12.4
$8,000 - $9,999	18.6	16.6	15.6
$10,000 - $14,999	25.5	26.9	29.3
$15,000 - $19,999	8.9	11.4	13.5
$20,000 - $24,999	3.4	5.3	7.2
$25,000 - $29,999	1.4	2.7	3.5
$30,000 and over	2.3	4.9	7.0
Total	100.0	100.0	100.0

*Per cent of entering freshmen with average high school grades of B+ or higher.

Source: American Council on Education, 1968: 35, 39.

level of parental income and the type of school attended, indicating the relative selectivity of each type. The table shows a significant clear-cut relationship, but once again SES probably does not account for very much of the variance.

The ACE data deal only with freshmen, but a 1966 Census Bureau study includes college students at all levels. It shows that there is a definite tendency for students from lower SES backgrounds to enroll in two-year colleges, regardless of whether SES is measured by parents' education, occupation or income. The detailed findings are shown in Table 2.12.

TABLE 2.12

TYPE OF COLLEGE OF DEPENDENT FAMILY MEMBERS 14-34 YEARS OLD ENROLLED IN COLLEGE, BY EDUCATION AND OCCUPATION OF FAMILY HEAD, AND FAMILY INCOME: OCTOBER 1966

(In Percentages)

	Total	2-Year College	4-Year College
Years of School Completed by Family Head			
5 or more years of college	100.0	7.1	92.9
4 years of college	100.0	12.9	87.1
1-3 years of college	100.0	20.3	79.7
4 years of high school	100.0	19.5	80.5
3 years of high school or less	100.0	23.6	76.4
Occupation of Family Head			
Professional and technical	100.0	11.5	88.5
Other white-collar	100.0	17.9	82.1
Blue-collar, service, and farm	100.0	22.1	77.9
Head not in labor force	100.0	24.1	75.9
Family Income			
$15,000 and over	100.0	10.5	89.5
$10,000 - $14,999	100.0	16.0	84.0
$7,500 - $9,999	100.0	23.3	76.7
$5,000 - $7,499	100.0	22.7	77.3
$3,000 - $4,999	100.0	24.7	75.3
Under $3,000	100.0	24.2	75.8

Source: U. S. Bureau of the Census, 1969d.

Moreover, the tendency for low SES students to attend junior colleges is not simply a result of lower ability. Table 2.13 shows the percentage of college enrollees who enter junior college by their SES and ability quartile when they were in high school. Quite clearly, even when ability is controlled, lower class individuals are much more likely to enroll in junior colleges.

TABLE 2.13

COLLEGE STUDENTS ATTENDING TWO-YEAR COLLEGES
BY HIGH SCHOOL SES AND ABILITY QUARTILE
(In Percentages)

Socioeconomic Status	Ability Quarters			
	1st (low)	2nd	3rd	4th (high)
1st socioeconomic quarter (low)	44	44	19	28
2nd socioeconomic quarter	21	28	26	11
3rd socioeconomic quarter	44	31	21	10
4th socioeconomic quarter (high)	32	27	15	6

Source: Schoenfeldt, 1968.

The two-year versus four-year distinction is significant in two respects. As we have shown, it is related to selectivity which (as will be demonstrated shortly) in turn influences attrition. However, there apparently is also a direct relationship to attrition, independent of selectivity. As Table 2.15 will show, students attending junior colleges receive bachelor's degrees at only about one third as high a rate as students attending the least selective four year colleges. Since the selectivity index of two year colleges is about one third as high (11 compared to 34; see Table 2.11) as that for all four-year colleges, it is not possible for there to be this much difference in the selectivity rates of two year colleges and the least selective four-year colleges. Therefore, some of the difference in the proportion of bachelor's degrees attained must be independent of the differences in selectivity. One of the factors which probably accounts for this residual difference is lower initial aspirations of students who attend two-year institutions. Twenty-six per cent of the 1968 freshmen enrolling in two-year colleges did not plan to obtain a bachelor's degree; 8 per cent planned not to obtain any degree and 18 per cent sought an associate degree (American Council on Education, 1968: 36). It seems unlikely that this accounts for all of the "residual difference," and probably the remainder is due to such factors as differences between the quality of faculty and facilities of two-year and four-year institutions.

Data are also available which measure selectivity more directly, using average scores of entering freshmen on nationally standardized examinations. This allows us to tabulate SES by selectivity per se rather than by type of institution. Table 2.14 indicates that father's education, occupation, and income are all related to the selectivity of the college one attends. Moreover, it is likely that these data understate the relationships, since the percentage of students who attend institutions for which selectivity scores are not available is considerably higher for those from low SES backgrounds. It seems reasonable to assume that nonavailability of a selectivity measure is generally related to low selectivity as such.

TABLE 2.14

RANK OF COLLEGE ATTENDED BY DEPENDENT FAMILY MEMBERS 14-34 YEARS OLD ENROLLED IN COLLEGE, BY EDUCATION AND OCCUPATION OF FAMILY HEAD AND FAMILY INCOME, FOR THE UNITED STATES: OCTOBER 1966

(In Percentages)

	Total	Rank of College by Index of Freshmen Aptitude			
		Low	Medium	High	Not Available
Years of School Completed by Family Head					
5+ years college	100.0	6.9	41.2	39.9	12.5
4 years college	100.0	10.6	38.0	37.3	14.3
1-3 years college	100.0	16.7	43.7	20.8	18.9
4 years high school	100.0	19.5	45.8	17.3	17.5
3 years high school or less	100.0	20.5	42.8	14.6	22.0
Occupation of Family Head					
Professional and technical	100.0	11.6	44.6	29.8	14.2
Other white-collar	100.0	14.6	41.5	27.0	17.1
Blue-collar, service, and farm	100.0	20.8	45.5	13.5	20.3
Not in labor force	100.0	22.9	39.4	16.0	22.1
Family Income					
$15,000 and over	100.0	9.5	38.9	39.9	11.9
$10,000 - $14,999	100.0	15.9	45.7	22.6	16.0
$7,500 - $9,000	100.0	17.3	47.0	17.9	17.9
$5,000 - $7,499	100.0	20.5	47.6	13.3	18.7
$3,000 - $4,999	100.0	25.3	37.7	11.3	25.9
Under $3,000	100.0	24.5	25.8	14.5	35.8

Source: U. S. Bureau of the Census, 1969d: 20.

Using path analysis, Spaeth (1968) found that the quality of colleges attended by 1961 college graduates was related to family income and father's education. The path coefficient for family income--college was .22 compared to .17 for ability-college quality. The coefficient for father's education was .115 but was not statistically significant. What is somewhat surprising here is that family income apparently is more important than ability.

When Folger, et al. (forthcoming) tabulated the 1960 TALENT cohort by socioeconomic status and type of institution their findings were similar, except that in their sample the lower SES groups were more evenly distributed across the various types of institutions than was the case in 1968. This could be an indication that the more selective institutions have become even less accessible to the lowest income groups between 1960 and 1968. The two sets of data are only very roughly comparable, however, and at best this difference is suggestive.

So far we have considered the relationships between (1) SES and type of college, i.e., primarily two-year vs. four year (Tables 2.11 and 2.12); (2) SES and type of college controlled by ability (Table 2.13); (3) type of college and selectivity (the selectivity index of Table 2.11); (4) type of college and attrition (discussion on pages 1-33 and 1-34); and (5) SES and selectivity per se (Table 2.14). Now let us consider the relationship between type of college, selectivity, and attrition simultaneously. Folger and his colleagues also analyzed the effect of the type and selectivity of the college attended on progress in college. Table 2.15 reproduces their findings. Clearly, the selectivity of the college influences the chances of graduation: the more selective the institution one attends the more likely he is to graduate. Attending a community or junior college--

TABLE 2.15

PROGRESS OF THOSE ENTERING COLLEGE, BY TYPE OF COLLEGE, SELECTIVITY OF COLLEGE, AND SEX: FOLLOW-UP OF 1960 PROJECT TALENT COHORT
(In Percentages)

College Type and Sex	Total	College Progress		
		Bachelor's Graduates	Still Enrolled	Dropped Out
	Males			
Junior College Transfer	100.0	20.5	(79.5)*	
Senior College Transfer				
Low and Low Medium Selectivity	100.0	50.6	22.7	26.7
Medium Selectivity	100.0	45.4	31.8	22.7
High Medium and High Selectivity	100.0	61.0	21.6	17.5
Senior College Nontransfer				
Low and Low Medium Selectivity	100.0	45.4	23.2	31.4
Medium Selectivity	100.0	54.6	20.9	24.6
High Medium and High Selectivity	100.0	76.8	11.6	12.0
	Females			
Junior College Transfer	100.0	22.7	(77.3)*	
Senior College Transfer				
Low and Low Medium Selectivity	100.0	62.7	10.2	27.1
Medium Selectivity	100.0	61.4	10.2	28.4
High Medium and High Selectivity	100.0	73.5	12.9	13.5
Senior College Nontransfer				
Low and Low Medium Selectivity	100.0	52.4	6.5	41.1
Medium Selectivity	100.0	60.8	7.4	31.8
High Medium and High Selectivity	100.0	74.3	4.0	21.7

*Figures on junior college graduates are comparable with senior college figures, but other figures cannot be separated into the dropped out and still enrolled groups.

Source: Folger, et al. (forthcoming).

institutions noted for their lack of selectivity--seems to have an especially detrimental effect on the chances of graduating from college. The recent report of the Human Resources Commission states:

> Paradoxically, the community colleges appear to have increased college opportunities for low-status youth, and at the same time to have increased the socioeconomic differential in college completion. They have been successful in getting low income youth into college, but have not increased their chances of getting a degree nearly as much. This is illustrated indirectly by examination of the socioeconomic differentials in college completion among students who did all their work in degree granting institutions, i.e., they never attended a junior college.
> (Folger, et al., forthcoming, Chapter 10.)

In summary, low SES students tend to attend the poorer quality colleges--though there are many exceptions--and this is significantly related to their high attrition rates.

Finally, it needs to be kept in mind that most of the future expansion of college enrollments is expected in the traditionally lower quality two-year colleges. Jaffee and Adams (1969: 35) estimate that "the two-year college's national share of all first time freshmen will rise from the 38 per cent reported for 1967 to perhaps 70 per cent by the early to mid-1980's, duplicating the current situation in the Far West." If the current relationship between SES, type of institution, and attrition continues, this means that most of the lower SES individuals brought into the higher education system through these channels will have low probabilities of obtaining a bachelor's degree.

(2) Effect on occupational status and income.--The type of college one attends is also significant in its effect on occupational status and income. For a long time, conventional wisdom has maintained that it is

advantageous to attend a "good college."[*] In a study of 9,000 college graduates conducted in 1947, Hovemann and West (reported in Clark, 1962; 72f.) found that there was a definite correlation between one's salary and the type of college he had attended. For example, graduates of Harvard, Yale, and Princeton had an average income in 1947 of $7,365 while other Ivy League graduates averaged $6,142. The differences were even greater for other types of schools: technical schools (e.g., MIT)--$5,382, twenty famous eastern colleges--$5,287, Big Ten schools--$5,176, all other mid-western colleges--$4,322, all other eastern colleges--$4,235.

A study conducted in conjunction with the March 1967 Current Population Survey (U.S. Bureau of the Census, 1969c) confirms the earlier findings of Hovemann and West. Colleges were ranked on the basis of the average aptitude of entering freshman from data developed by Project TALENT at the University of Pittsburgh. The relationship between rank of college and 1966 median earnings, by degree level, is shown in Table 2.16.

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[*] Several things must be noted about the nature of this relationship. First, the relationship is in part spurious. Traditionally the sons of well-to-do families have gone to high prestige schools, but in most cases these individuals would have high incomes no matter what college they attended. Secondly, insofar as the relationship is not spurious a number of possible intervening variables are involved, i.e., whether the advantage is due to: better training, the personal contacts one makes, the effect of having a prestige degree, etc. The relationship is probably quite complex. Davis (1966), for example, has suggested that attending a high selectivity college may in some respects reduce occupational aspirations for students who rank toward the bottom of their class. He argues that even though they are considerably above the national average in ability they perceive their abilities relative to their more talented classmates and revise their career aspirations downward. However, in a reanalysis of Davis' work using the logic of path analysis, Werts (1968b) demonstrates that the data Davis presents are not adequate to confirm his hypotheses.

TABLE 2.16

RELATIONSHIP BETWEEN MEDIAN INCOME OF COLLEGE GRADUATES AND THE RANK OF THE COLLEGE THEY ATTENDED, BY LEVEL OF DEGREE: 1967

Rank	1966 Median Incomes			
	All Degrees	Bachelors	Masters	Others
All ranks	$ 9,489	$ 9,096	$ 9,339	$12,900
Low	7,881	7,641	8,327	N.A.
Medium	9,752	9,324	9,407	13,785
High	11,678	11,305	10,555	16,087
Not available	8,598	8,362	N.A.	9,041

Source: U.S. Bureau of the Census, 1969e: Table No. 4.

The effect is especially strong at the bachelor's level where those attending low ranking colleges make 33 per cent less on the average than those from top ranked institutions. This is especially significant since much of the expansion in enrollment is probably occurring in those institutions with relatively low ranking.

There are some data, however, that suggest that quality of college has little effect in a five year follow-up of a national random sample of all 1958 college graduates, Sharp (1969) found little relationship between the type of college and salary or attainment. One possible explanation of the apparent contradiction between the findings of Sharp and the recent Census Bureau study is that institutional effects accumulate over a relatively long period of time, and have not had much measurable effect only five years after college--the focus of the Sharp study. This interpretation is supported very indirectly by the finding of Blau and Duncan (1967) that the effect of education on one's first job had not increased over time, but that its effect on later occupational status had.

d. SES, college major, and career choice.--Another way in which a person's class background tends to influence his future class position is through the selection of a college major and its subsequent effect on occupational attainment. In a study of a large random sample of 1958 college graduates Sharp (1963, Table A-4M) found that there was a relationship between father's occupation and major field of study. This seems to be especially true for majors which involve a fairly specific career commitment with strong implications for future occupational status. For example, 32 per cent of those graduates who were premedical majors had fathers who were classified as professionals, even though only 11 per cent of the total cohort had fathers with this occupational designation. In contrast, 23 per cent of the fathers were classified as farmers, farm laborers, or service workers, yet their sons made up 41 per cent of those who majored in education. Medicine is, of course, one of the highest status occupations, while primary or secondary teaching has traditionally been a relatively low status occupation for college educated men.

In Davis's study of 1961 (1964a and 1964b), there were similar findings: students with high SES backgrounds tended to make up a disproportionately high percentage of those going into the traditionally high status professions like medicine and law, whereas low SES students tended to be overrepresented in teaching and engineering. He also developed a theory that changes in majors and occupational intentions occurring in college are largely a result of individuals shifting to majors in which the students are closer to those of like personal and background experience.

Several recent articles by Werts (1966 and 1967a) have explored this relationship at some length. Cross-sectional analysis revealed that both father's occupation and father's education were linked to career choice, with high SES tending toward careers in law, medicine, and social sciences while low SES was related to education and engineering. When controls are made for academic ability it was found that both SES and ability have an independent effect. There are, of course, important exceptions. Engineers, chemists, and clergy, who have relatively high occupational status, tend to come from below average SES backgrounds. The relationship between father's education, ability (as measured by high school grade average) and the propensity to select various occupations is shown in Figure 2.1 (reproduced from Werts, 1967a). Werts also comments: " . . . the orderings from one study to another are so consistant that further cross-sectional studies of ability or SES differences among career choices of college students hardly seems worthwhile."

In a later article Werts (1967b) analyzed these relationships using longitudinal data on freshmen entering college in 1961, who were followed up in the summer of 1962. After the first analyses of the data he concludes "the results confirm Davis' finding that 'deviant' students tend to switch their preferences to career choices more compatible with their personal characteristics." This proposition is summed up as the "birds of a feather flock together" theory. In other words, those who come from low SES backgrounds, but enter high SES majors, tend to later switch to fields with greater proportions of low SES students. The reverse is true for high SES students and the same process applies to ability.

A later analysis (Werts and Watley, 1968) of the same data greatly qualified the conclusion. "A reanalysis will demonstrate . . . that (the

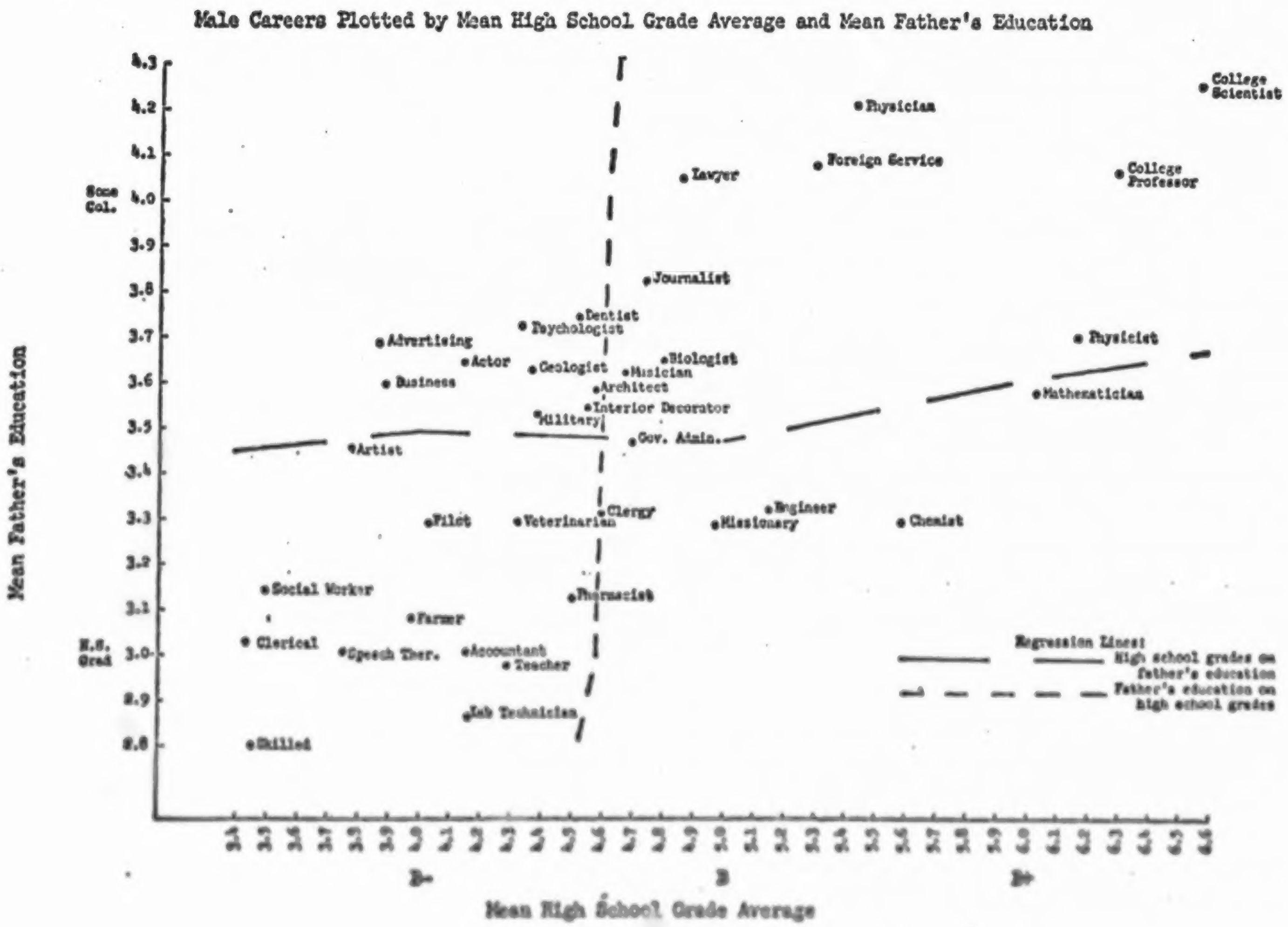

Figure 2.1.--The effects of socioeconomic background and academic achievement on college majors.

Source: Werts, 1967a.

earlier) conceptualization is incomplete because it does not deal explicitly with the possibility that student characteristics may be modified during the college years; 'birds' may change their 'feathers.'" However, most of the qualifications involve the effects of academic ability. With respect to the effect of father's education, the results show an increasing homogeneity within fields for males. That is, fields dominated by students from high (or low) SES backgrounds tend to become more so. However, the opposite seems to occur for females. In short, it is probably accurate to say that there is a moderate relationship between SES background and the SES implications of the college major and career field one chooses. This relationship, however, is frequently affected by other personal and environmental or low SES backgrounds than for those from the middle class, and stronger for males than females.

e. SES and graduate education.--The evidence concerning the effect of SES on the attainment of graduate education is less clear. It seems likely that SES continues to exert some influence on who enrolls in graduate education, though considerably less than on undergraduate enrollment. There is some evidence to indicate that an influence is exerted on the type and level of graduate education attained, but the data are only suggestive.

In a 1965 survey of graduate students conducted by the Office of Education (Hunter, 1967), four indicators of SES were used: parents' income, father's occupation, father's education, and mother's education. Initial examination of the data gives the impression that enrollment in graduate school is not related to SES since low SES groups seem to be very well represented. To quote the report: "Graduate students come from all socioeconomic levels. More than one-half reported that at the time they were graduated from high school their fathers made less than $7,500 a year (Hunter, 1967: 5)." Moreover, when the educational attainment and the occupations of the fathers are compared to those of the fathers of the 1961 college graduates studied by Davis (1964: 6), the distributions are almost identical. Further reflection, however, raises serious questions about the usefulness of the OE data for studying the effects of SES on graduate enrollment and attainment. The problem is that all of the graduate students enrolled at any one time are not really a cohort.* Consequently, there is not an appropriate group of college graduates without graduate work with which to compare them in order to determine the correlates of graduate enrollment. It is even difficult to compare them with the population in general since the socioeconomic significance of parents' income, educational attainment, and to a lesser extent occupation is relative to the age cohort of the parents and the time of the observation (e.g., respondents were asked to report their parents' income for the year they graduated from high school, which would of course depend on the age of the respondent). The most we can say is that the data suggest that there is probably not a strong relationship between SES and graduate enrollment.*

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*The 1965 students have the following age distribution:

23 and under	14%
24 - 28	40
29 and over	45

*There are also technical difficulties with the data. It was collected by a mailed survey, and while the response rate was relatively high--78 per cent--there was no follow-up of a sub-sample of the nonrespondents in order to correct biases introduced by nonresponse.

Wegner (1969) studied 266 individuals who graduated from the University of Wisconsin in 1958 and 1959, and were interviewed in 1964. He found that for men there was at best a slight relationship between SES and postgraduate work. For women the relationship was negative; that is, low SES women were more likely to pursue postgraduate degrees. His population is, of course, a very restricted one.

Davis's (1964a: 118) study of the postgraduation plans of 1961 college seniors a few weeks before graduation found:

> SES has no consistent effect among women, but among male students higher SES was generally associated with immediate advanced study, lower SES was associated with perceived financial obstacles, and there was no consistent SES difference in motivational reasons.

Sharp's (1963) 1960 survey of 1958 college graduates produced like results. Graduate school attendance seemed to be related to parents' educational level for men but not for women. Table 2.17 reproduces these findings. Sharp found little relationship between father's occupation and propensity to enroll in graduate school, but the occupational categories used are broad and measure social status very imprecisely.

This study also found that " . . . graduates whose parents were more highly educated were somewhat more likely to have received a graduate degree within the 2-year period and to be working toward a second degree." This relationship also held only for men.

Sharp also has data (collected in 1960) on those who received master's degrees or professional degrees in 1958. These data are difficult to interpret, however, because as in the case of the Office of Education data discussed above it is not clear with whom these degree recipients should be compared in order to determine the effect of SES on their attainment. Table 2.18 shows the percentage of master's recipients which come

TABLE 2.17

PROPORTION OF BACHELOR'S DEGREE RECIPIENTS WHO SOUGHT OR RECEIVED A GRADUATE OR PROFESSIONAL DEGREE, BY SEX AND PARENTS' EDUCATION: 1958 GRADUATE

Parents' Education	Number in Survey		Per cent Enrolled for Graduate or Professional Degree	
	Men	Women	Men	Women
Total*	20,399	11,723	33.8	19.6
Both parents college graduates	1,619	1,346	43.3	19.4
Father only college graduate	2,123	1,638	41.4	19.2
Mother only college graduate	1,059	793	32.8	19.3
Both parents some college	739	574	37.2	18.3
One parent some college	2,677	1,743	33.8	20.1
Both parents no college	11,680	5,381	31.2	19.8

*Includes 750 respondents who did not report their parents' education.

Source: Sharp, 1963: 39.

TABLE 2.18

SOCIOECONOMIC BACKGROUND OF MASTER'S DEGREE RECIPIENTS
(SELECTED FIELDS OF STUDY)

Field of Study	Per cent in High Socioeconomic Status*		Per cent in Low Socioeconomic Status**	
	Men	Women	Men	Women
All fields	46	49	28	22
Mathematics	47	65	27	18
Physics	62	***	23	***
Chemistry	40	55	32	20
Engineering	51	***	25	***
History	48	68	31	10
Political science	57	***	15	***
Psychology	53	52	24	10
English	51	51	25	25
Art	48	59	29	21
Education	36	45	33	24
Business and commerce	55	***	22	***
Social work	40	58	42	24
Nursing	***	39	***	27

*Father's occupation: professional, proprietor, business official or executive.

**Father's occupation: skilled operator, machine operator, service worker, laborer, farm worker.

***Too few cases to compute percentages.

Source. Sharp, 1963: 72.

from high status and low status backgrounds as measured by father's occupation, controlled for major field of study. This table is at best suggestive both because a distribution is presented rather than a relationship and because, as noted above, this measure of social status is rather imprecise. Another thing that the table suggests, however, is the tendency for those with low status family backgrounds to go into relatively low status (or at least low paying) fields, e.g., education, while those from high status backgrounds tend to go into higher status fields, e.g., engineering and physics. This does not hold for all fields, with social work being a conspicuous exception.

The findings for professional degree recipients are about what "common knowledge" would predict: "With respect to family background, M.D.'s and L.L.B.'s were more often of higher socioeconomic origin than were those in other fields. Taking into account both the educational and the occupational levels of the family, the law graduates included the highest proportion of persons from 'high status' families" (Sharp, 1963: 5).

An analysis of the 1960 Project TALENT cohort (Folger, et al. (forthcoming), Table 5.20), shows SES to have a statistically significant but weak effect on graduate enrollment. The multiple correlation coefficient for five indicators of SES was .183 for men and .104 for women. It should be kept in mind, however, that none of 38 background and personal attributes was very useful in predicting whether or not college graduates would attend graduate school. All 38 variables accounted for only about 13 per cent of the variance. What is most surprising is that ability variables were only slightly more predictive than SES. The multiple correlation coefficients for measures of five types of ability were .231 for males and .182 for females.

However, when essentially the same data are tabulated in the form of probability tables (Table 2.19) we see that SES makes a significant

TABLE 2.19

PROBABILITY OF STUDENTS WITH BACHELOR'S DEGREES ENTERING GRADUATE SCHOOL
IN YEAR AFTER RECEIPT OF DEGREE, BY ABILITY AND SES:
PROJECT TALENT COHORT
(In Percentages)

Ability	SES			
	1 (High)	2	3	4 (Low)
1 (high)	54.0	50.6	41.8	30.5
2	41.7	40.8	29.4	49.2
3	43.1	39.6	33.7	17.6
4*	39.6	25.7	30.2	24.5
5* (low)	45.8	14.0	33.3	12.8

*The number of observations in the cells in these rows is very small.

Source: U.S. Department of Health, Education, and Welfare, 1969:
Table A-16.

difference in the chance that a recipient of a bachelor's degree has of entering graduate school, even when ability is controlled. College graduates in the top SES and ability quartiles are almost twice as likely to attend graduate school as those with the same ability but in the bottom SES quartile. Such differences seem to hold at most ability levels. A word of caution is in order, however. The number of observations which the figures are based on are relatively quite small and therefore subject to much greater sampling error than the Project TALENT data dealing with earlier stages in the educational process.

SES apparently has a slight influence on both the chance of getting some kind of graduate education and the quality of the graduate school attended. As indicated earlier, Spaeth (1968) found that the quality of the college attended was independently influenced most by family income, slightly less by ability, and probably also by father's education. The two SES variables also influence the quality of graduate school attended, both indirectly through the quality of the undergraduate college attended and the individual's college grade point average and probably directly--though the direct regression coefficients are not significant and all of the relationships are weak. However, as Spaeth (1968: 348) comments:

> (The multiple correlation) was .25 between the SES variables and quality of graduate school. The .25 explains relatively little of the variance (six percent), but the impact of parental SES is not trivial considering that the correlation applies to men who have not only graduated from college but also were enrolled in a program leading to an advanced degree. . . .

In a study of college professors and recipients of doctoral degrees, Crane (1969) concluded that class origin continues to influence occupational achievement (defined here as holding positions at top ranked universities). This was in part due to the fact that low SES individuals were more likely to receive degrees from low-ranking universities. However, even when low SES individuals graduated from prestige universities they were still less likely to be on the staff of such universities than were their middle class individual counterparts.*

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*Hargens and Hagstrom (1967) also found "that the prestige of the institution where a scientist received his doctorate is related to the prestige of his present affiliation even when the effects of productivity are controlled." Hargens (1969) also found that for new Ph.D.'s vertical academic mobility is more limited than indicated by earlier studies.

(8)

In sum, it is probably fair to conclude that SES continues to have some effect on who enrolls in graduate school, who completes graduate degrees, whether one takes work in a relatively low or high status field, the quality and prestige of the graduate institution, and apparently even on the occupational achievement of those with Ph.D.'s from major universities. The effects at this point are admittedly slight in terms of how much of the total variance is accounted for.

f. Summary.--In this chapter we have focused upon the effects of socioeconomic background on the individual's "college career." The general finding is the obvious one that, at a variety of points, those from high SES backgrounds have a definite advantage over those from low SES backgrounds. More specifically, high SES individuals are more likely to (1) enroll in college, (2) stay in college and graduate, (3) attend a high quality institution, (4) major in a subject that leads to a high status occupation, and (5) enroll in graduate school and obtain a graduate degree. A related finding, which is hardly surprising, is that the effect of SES does seem to weaken the farther and individual has progressed through the higher education system. The most plausible interpretation is that as individuals mature the status and social relationships of their family of origin make up a decreasing part of their total set of social relationships. At the same time, more recently acquired relationships--especially academically achieved statuses--play a more important role in shaping their personality structure and behavior and especially their academic performance. On the other hand, it is at least mildly surprising that socioeconomic background apparently continues to affect the academic and occupational achievement, not only of graduate students, but even of those who have obtained Ph.D. degrees from high prestige institutions.

Of course, it is to be expected that SES would have some effect, but the important question concerns the strength or significance of the effect. The answer to this question is in large measure dependent upon the reference point. Compared to most other societies, present and past, a high degree of egalitarianism exists and the effect of ascribed status is very modest--generally less than the effect of ability. When considered in terms of causation or "variance accounted for," the effects of SES are quite significant compared to any other factor which has been measured up to this time, but it still "explains" very little of the total variance. On the other hand, when we compare the findings to some model of perfect equality or perfect equality of opportunity we see that the effects of SES are very great indeed. It can hardly be argued that the educational system is truly egalitarian when those from the upper SES quartile are two to three times as likely to enter college as those with the same level ability but from the lower SES quartile. And, it must be kept in mind that very likely the measures of ability are biased in favor of those from high socioeconomic backgrounds, so that the actual inequities are greater than the data indicate.

Regardless of which of these perspectives is used to interpret the data, one implication of these findings is clear: simply reducing the inequality of opportunity at the point of entry into college--or even throughout the undergraduate career--cannot be expected to equalize fully the life chances of those from different socioeconomic backgrounds. Whether it will make a significant contribution toward reducing inequality and inequality of opportunity in the societal stratification system is a question we will consider in subsequent chapters. Next, however, we must consider the extent to which federally funded student aid will equalize access to the higher education system.

3. The Uses of Federal Aid

a. Introduction.--We have seen that at every point in the process of attaining a higher education SES seems to exert some influence in producing inequality of opportunity, though its impact seems to grow weaker the farther one has progressed. These findings are hardly startling, but they help to set the context for our next problem: can these inequalities be removed or even significantly reduced by federal aid to higher education?

There are two primary ways in which federal aid to higher education might help to increase equality of opportunity. The first is to encourage more equal rates of initial enrollment in college for all SES groups through precollege counseling, recruiting, and remedial programs--and possibly more rigorous screening of low ability, high SES students. These means will be discussed only briefly in the next section. To the extent that such programs involve early and extensive training and counseling, they are matters of primary and secondary education rather than higher education, and fall outside our immediate focus. We will, however, consider two programs which are more "college related."

The second primary way federal aid to higher education might stimulate equality of opportunity is by attempting to equalize the financial resources available to those qualified to attend college. This is the primary focus of the chapter and is taken up in section c. entitled "Reducing the cost to students."

b. Precollege noneconomic assistance: recruitment programs.--Two federally supported recruitment programs are now in operation.* One is the Talent Search program operated by the Office of Education, aimed at relatively disadvantaged students, though not necessarily at the lowest income groups. The program is operated by local, state and regional agencies through grants from the Office of Education, and relies primarily on providing information about opportunities for higher education. It has been in operation a relatively short time and no evaluative data are yet available.

The second program is Upward Bound, formerly operated by the Office of Economic Opportunity, but now in the process of being transferred to the Office of Education. The program focuses on low achievers from the lowest socioeconomic classes. It offers these students remedial counseling and training during the last two years of high school. Of the first group of 953 students, 762 or 80 per cent went on to college. Fifty per cent of this group (388) entered the sophomore year. The cost of the program was approximately $2,400 per student. Froomkin concludes:

> First indications are, therefore, the Upward Bound will successfully motivate the disadvantaged youth to enter college, but the students will have difficulty completing their programs. (1968: 33.)

While experimentation with such programs seems worthwhile, they will probably have the same limitations with respect to cost and effectiveness that nearly all attempts at large-scale quasi-psychotherapy have encountered.

A logical extension of the types of programs described above would be further federal encouragement of counseling and guidance services in high schools. However, Cicourel and Kitsuse's (1963) case study of talent development by this means opens to serious question the extent to which such programs would meaningfully increase equality of opportunity. They found that while decisions concerning the "proper" educational programs were not necessarily based on traditionally ascriptive influences, other equally nonrational and arbitrary considerations come into play. Moreover, low income students tended to receive less encouragement since the counselor's performances were measured in terms of the ratio between students admitted to college and students who declared they wanted to attend. Therefore, encouraging students who might not be able to afford to attend college would have the effect of lowering the counselor's performance. Jaffee and Adams (1969) have also developed extensive quantitative data from the Coleman Report which show that high school counselors discourage significant numbers of low SES and minority group students from attending college--even though they desire to do so, their mother desires that they do so, and they apparently have the required ability.

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*Discussion of these two programs is based primarily on Froomkin, 1968.

It does not follow from these findings that such a process is inevitable unless financial aid is expanded. The counselors could be explicitly measured in terms of other criteria, e.g., the per cent of lower class youth who apply for financial aid. However, extensive recruitment efforts among low SES students without subsequent financial assistance would produce frustration.

Three tentative conclusions seem warranted. It is unlikely that intensive remedial programs on other than an experimental basis can be justified because of the cost per student involved. The probable impact of less intensive, more widespread recruiting programs is unknown. Finally, insofar as such programs are successful they will need to be linked with at least some expansion of financial aid--the question to which we now turn.

c. Reducing the cost to students.--Inequality of opportunity can be reduced, it is commonly believed, by furnishing more scholarships, loans, work programs or tax relief to low SES students and/or providing low tuition colleges and universities. Two principal kinds of mechanisms are at work in these programs. The first is simply the reduction of financial barriers by helping to meet the cost of attending college. The second involves increasing a student's self esteem through financial assistance and, subsequently, his motivation to study. Our primary focus will be on the first type of mechanism; the latter type will be considered more briefly. Now we will consider the general effects that any program of reducing the cost to students through expanded aid is likely to produce through these two mechanisms. Later we will attempt to estimate the differential effects of alternative forms of aid.

(1) General effects.--We now ask how extensively additional financial resources for low SES groups might increase their enrollment and attainment in higher education. Underlying this problem is the question of what the social mechanisms are which intervene between the relationship of low SES and low college attendance and completion. Figure 3.1 presents a diagrammatic model of the causal relationships that are frequently assumed to influence the attainment of higher education. The model is presented as a means of briefly summarizing a number of implicit and explicit propositions which arise when the effects of SES and financial aid on college attendance are discussed.

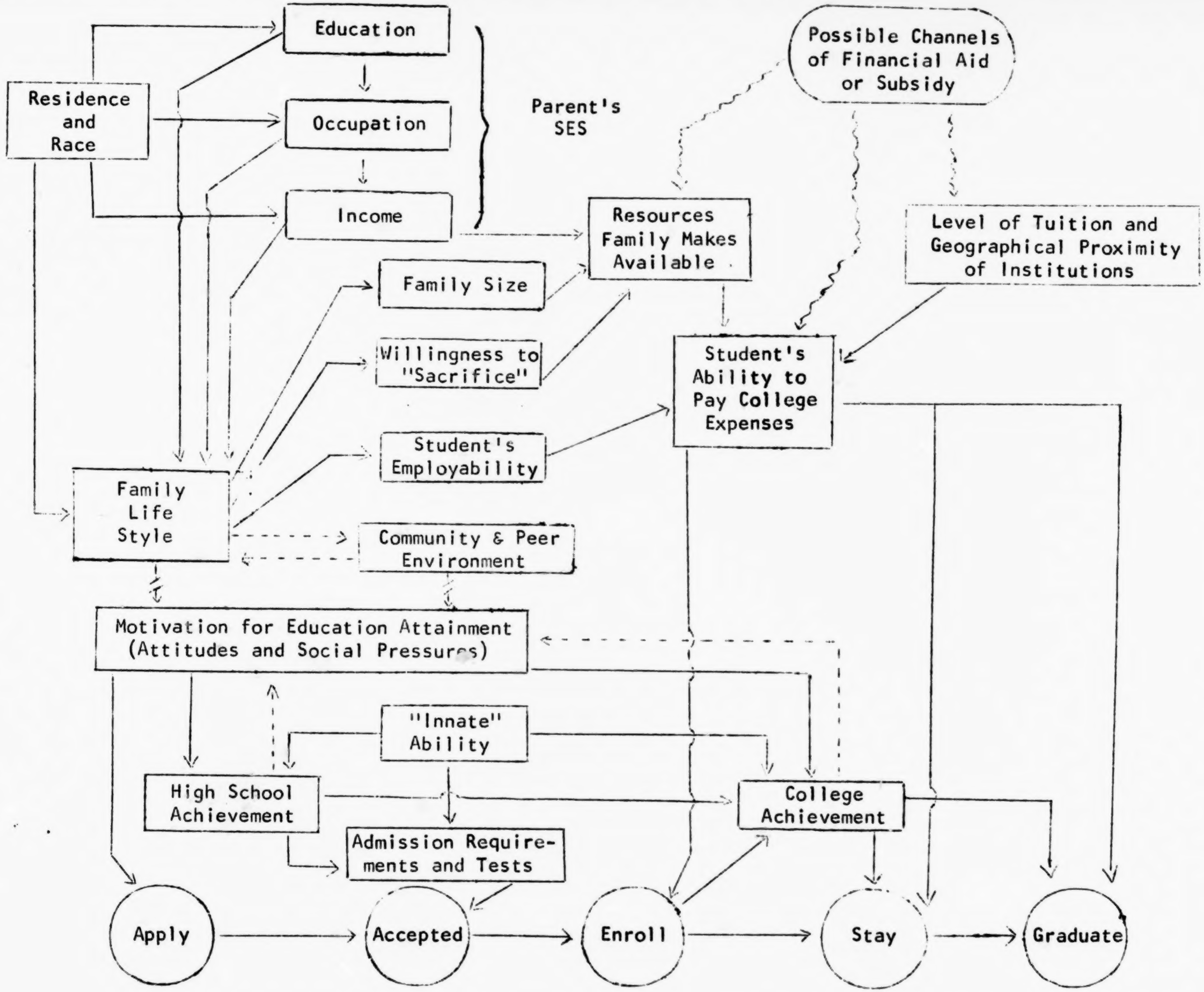
Education
Occupation
Income
Parent's SES
Residence and Race
Possible Channels of Financial Aid or Subsidy
Resources Family Makes Available
Level of Tuition and Geographical Proximity of Institutions
Family Size
Willingness to "Sacrifice"
Student's Ability to Pay College Expenses
Student's Employability
Family Life Style
Community & Peer Environment
Motivation for Education Attainment (Attitudes and Social Pressures)
"Innate" Ability
High School Achievement
College Achievement
Admission Requirements and Tests
Apply
Accepted
Enroll
Stay
Graduate

Fig. 3.1--A model of factors affecting college enrollment and completion

Examination of the model indicates that there are two relatively separate chains of causation that determine whether an individual receives a college education. One leads from family background characteristics, through individual motivation interacting with "innate" ability, to performance. The other causal chain leads from family income (qualified by such factors as family size, willingness of the family to reduce their level of living, and the employability of the student) to the student's ability to meet the cost of higher education. Since our primary concern is with the societal effects of increased student financial aid rather than with micro processes, we will not examine the evidence about each of the relationships specified in the model in any detail. Rather the model is presented as a set of contextual assumptions in order to remind us of the complexity of the intervening processes between socioeconomic background, and enrollment and attainment in college. As complicated as the model appears it is still greatly oversimplified. This is especially true with respect to the factors which affect what has been labeled "motivation for educational attainment." There is a considerable body of sociological literature relevant to the specification and elaboration of this model and especially the factors influencing motivation. (Some of the more important references are: Kadel and Lesser, 1969; Sewell and Shah, 1968b; Beverly Duncan, 1967; James Davis, 1966; Richard P. Boyle, 1966; Adams and Meidon, 1968; Sewell, 1964; McDill and Coleman, 1963; Schachter, 1963; Eckland, 1965; Crane, 1965; Elder, 1965; Sewell and Armer, 1966; Ellis and Lane, 1967; Sexton, 1961; Sewell and Shah, 1968a; McDill, et al., 1969.) Now we will proceed to summarize the evidence concerning the consequences of reducing cost (to students) for higher education.

Nash (forthcoming) has made an extensive review of the literature on the effects of student financial aid, for an article to appear in the fourth edition of the Encyclopedia of Education Research. After reviewing some 20 items of research covering about the same number of years he concludes:

> The relations between finances and college attendance is a complex one. Although money emerges as an important factor, it has come to be generally accepted that grant aid alone, offered at the end of the senior year of high school, will have relatively little effect on increasing the number and proportion of students who will attend college.
>
> . . .A large proportion of less talented, poorer students are not now attending college who could benefit from the education. To get these students to college requires both counseling and careful liaison between high school and college in addition to financial aid.

Jencks and Riesman (1968: 21) come to similar conclusions in their recent extensive study of academia:

> All in all, then we are inclined to be skeptical about theories that emphasize the high cost of attending college as the major obstacle, and to look for other explanations of the obvious relationship between class background and attainment.

Moreover, there are recent empirical studies not included in the reviews by Nash or Jencks and Riesman which come to the same conclusions. For example, Kimball (1968) reports that a study of 515 scholarship recipients in New Hampshire shows that the award received had little effect on educational aspirations or plans:

> Responses from 515 applicants suggest that these relatively small awards do not change the educational plans of recipients. Students most frequently report that such awards diminish the financial burden placed on student and family; post secondary educational choices usually are unchanged by the availability or absence of small scholarships. Even if scholarships were larger it appears the effect would be similar. Fewer than one third of the students report that a larger scholarship would cause a significant change in post secondary education.

Kimball's sample is certainly not representative of the national population, but the point we are making is that the "traditional literature" on student aid continues in the same line described by earlier surveys of these data.

However, the findings of Kimball and others do indicate that such financial assistance has enabled students to be more satisfied with their college experience. As one student put it, "The award enabled me not merely to attend college, but to become a part of it." (Kimball, 1968: 784)

Similar conclusions seem warranted with respect to the importance of finances for dropping out of college. Where finances do play a role, Nash (forthcoming) suggests that often students do not find college a sufficiently rewarding experience to make the financial struggle worth the effort. In a study of dropouts at twenty colleges and universities, Iffert and Clarke (1965) collected data on the "one most important reason for dropping out of college." They found that academic problems were the main reason given by far, with health and family problems next. Financial problems were third, with 17.9 per cent of those at public schools and 11.4 per cent of those at private schools giving this reason. It is quite likely, however, that this reason is given because it is socially acceptable rather than because it is the actual motivating factor. It does not seem likely that the need to work is an underlying problem behind the academic problems of dropouts. Studies of working students indicate that employment does not seem to affect their grades adversely.

In short, the "traditional" literature on student aid concludes that (1) money is not the main factor limiting lower class enrollments, and (2) consequently the greater availability of more financial aid is not going to increase enrollment of low SES groups very much, though it will help some. Two recent studies have come to slightly different conclusions;

in part this variance may be due to a difference in the methodological assumptions of these and older studies. In commenting on the methodology of the earlier studies Nash (forthcoming) points out that there are two ways in which this problem has been studied: "First, a sample of students enrolled in college can be asked what effect financial aid had. Second, a group of students can be selected while in high school and those who don't attend can be asked about their reasons for nonattendance." Both of these methodologies depend solely on the respondent's conscious knowledge about himself to explain his behavior. The two recent studies, on the other hand, do not depend on asking people why they did or did not attend (or stay in) college, but rather on observing variations in attendance rates in relation to variations in the availability of student aid or the cost of attending college. In other words, they are more strictly "behavioral" in approach.

The first of these is a study that was conducted by Paul Feldman and Stephen Hoenack (1969) of the Institute of Defense Analysis in connection with the HEW report to the President entitled Toward a Long-range Plan for Federal Financial Support for Higher Education. (The preliminary findings are presented in Appendix B of the above report). In brief, the study attempts to develop an economic demand model which will predict increases (and decreases) in enrollments in relation to changes in tuition for different income levels, ability groups, and types of institutions. The analysis is based on data from the tenth grade Project TALENT cohort and information on tuition charges at different types of institutions. The preliminary findings of the study are that for every $100 increase (or decrease) in tuition, enrollment would decrease (or increase) by five per cent. Lower income groups showed more responsiveness than high income groups (the preliminary analysis dealt only with families with incomes between $6,000 and $12,000). The study also attempted to determine what effect lower college tuition rates might have on influencing completion of high school. The findings were that graduation rates are increased 0.7 per cent for each $100 decrease in tuition, with lower income groups being the most responsive and the relationship disappearing for those with incomes above $7,300. If these findings are valid, college enrollment is much more responsive to changes in the cost of tuition than earlier studies had even suggested.

In a later report of their research, Feldman and Hoenack (1968b) seem to have revised their findings drastically and, to a degree, come to focus upon different issues and problems. No mention is made here of the effect of tuition changes on high school or college completion. The problem is still conceptualized in terms of the effects of a $100 increase in tuition and on the proportion of tenth graders in various income and ability quartiles who will enroll in college within one year after high school graduation. However, the focus is on the differences in effect according to (1) type of colleges, (2) income and ability and (3) sex. The findings are that such a tuition increase would have no effect for males or females at two year colleges. For four-year private institutions it would have little effect on female students except those in the highest ability level where enrollment would be reduced--for this subgroup--about three per cent. A tuition increase would, however, have a substantial effect on males. Those in the relatively low income and ability groups would be affected most with the impact decreasing proportionately as these two variables increase. At public four year colleges the effect is even more substantial, though the effects of family income and ability are different for each sex.

For females, demand would be reduced the most for those with low ability scores but high incomes, while for males the greatest reduction would be for those with both high incomes and ability. In summary, the most important findings are that demand for higher education is definitely influenced by tuition, but the lowering tuition at public institutions is more likely to increase enrollments for upper income groups then for lower income groups.

While it is difficult to criticize this study on the basis of the limited information available about it,* at least one question must be raised about its direct relevance to our concerns. The preliminary analysis did not deal with families whose incomes are below $6,000 and it is these families which are of most concern in terms of improving equality of opportunity. Apparently, the later analysis was restricted to even higher income groups, though this point is unclear.

The second study was conducted by Joseph Froomkin, Assistant Commissioner for Program Planning and Evaluation of the Office of Education. Some of its preliminary findings are reported in The Chronicle of Higher Education (1969). Mr. Froomkin reports that college enrollment by lower class youth was much higher in 1968 than would have been expected on the basis of projections of 1966 enrollments. His findings are presented in Table 3.1.

According to the Chronicle article, Froomkin does not say that the increased enrollment for lower income groups is the result of any specific federal program, but apparently does suggest that increases among poor

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*The methodology involved in making the estimates was not described in any of the published materials. We are frankly skeptical about the validity and relevance of these findings, but include them because they apparently are an important reference point for the Rivlin Committee's Toward A Long Range Plan. . . . (U.S. Department of Health Education and Welfare, 1969).

TABLE 3.1

FALL 1968 FRESHMAN ENROLLMENT AND ITS VARIANCE FROM LEVELS PROJECTED IN 1966, BY FAMILY INCOME AND TYPE OF INSTITUTION

	Less Than $4,950		$4,950-7,970		$7,970-11,580		Over $11,580	
	Fall 1968 Enroll-ment	More or Less Than Expected	Fall 1968 Enroll-ment	More or Less Than Expected	Fall 1968 Enroll-ment	More or Less Than Expected	Fall 1968 Enroll-ment	More or Less Than Expected
Public 2-year colleges	50,000	+27,000	96,000	+39,000	106,000	+35,000	103,000	+ 5,000
Private 2-year colleges	9,000	+ 4,000	21,000	+ 6,000	25,000	+ 8,000	34,000	+ 8,000
Public 4-year colleges	42,000	+17,000	74,000	+15,000	91,000	+25,000	99,000	+26,000
4-year nonsectarian colleges	9,000	+ 3,000	14,000	+ 1,000	22,000	+ 4,000	58,000	+ 4,000
4-year sectarian colleges	15,000	+ 2,000	28,000	-10,000	40,000	-13,000	63,000	-48,000
Public universities	27,000	+10,000	61,000	+ 7,000	101,000	+22,000	159,000	+20,000
Private universities	4,000	+ 1,000	10,000	0	20,000	+ 3,000	52,000	- 1,000
Technical institutes	2,000	+ 1,000	6,000	+ 1,000	13,000	+ 1,000	19,000	+ 3,000
All institutions*	159,000	+66,000	311,000	+61,000	420,000	+90,000	583,000	+12,000

*Figures do not add up exactly because of rounding.

Source: The Chronicle of Higher Education, 1969.

students were in large part the result of programs initiated by the Higher Education Act of 1965. While it is hard to judge the validity of the findings on the basis of the scanty information available, several points must be raised. First, the inference that jumps in enrollments were due to federal aid must be examined carefully when the full study becomes available. Second, if causation is involved, it does not necessarily follow that more aid would produce equally dramatic results since initial aid would probably go to those of lower SES who were highly motivated but lacked funds. As more and more funds are made available, motivation rather than finances is likely to be the bottleneck. Third, and most important, these figures deal with initial enrollment, not with relative educational attainment. Simply because lower SES groups make up an increasingly higher proportion of those who enter college, it does not necessarily follow that these students will increase their relative educational attainment in the same proportion. In fact, Froomkin's figures show that lower income students definitely have disproportionately high enrollments in institutions characterized by low quality and high rates of attrition. Moreover, the proportion of the lower income students enrolled in such institutions will increase in the future, according to Froomkin's figures.

What can be concluded about the probable effects of reducing the cost of higher education to lower SES students? The data are in part contradictory. According to the major portion of the literature, financial barriers are only one of many factors which reduce lower class enrollments and are probably less significant than motivational and academic factors. The findings of two studies (Feldman-Hoenack and Froomkin) seem to suggest that financial considerations are more important. A reasonable conclusion seems to be that further reduction of the cost of a college education to those from low SES backgrounds would help to increase their rates of initial enrollment. While this would reduce the gap between upper and lower class rates of enrollment to some extent, it is likely that most of the gap would not be eliminated in the foreseeable future.

(2) Alternative forms of aid.--The problem on which this study initially focused was determination of the form of federal aid--scholarships, loans, work programs, tuition reduction, etc.--most likely to have the greatest impact on reducing inequality. As earlier sections have indicated, the focus of the study has shifted because we concluded that none of the commonly proposed forms of assistance will have "much" impact on either equality of opportunity or equality in the societal stratification system. However, they will have some impact. Moreover, they will have helped to increase the number of lower class youth who enroll in college and will increase their absolute level of educational attainment even though there is little change in their relative attainment, the crucial variable for equality. Consequently, it is necessary to attempt to evaluate the relative merits of the various forms of aid even though this is no longer the only focus of our analysis.

As noted earlier, the question of which form of cost reduction will best stimulate equality of opportunity breaks down into two subproblems. The first has to do with which form of aid will give how much financial assistance to which socioeconomic groups. The second considers which form of aid is more effective in encouraging students to seek higher education, holding constant the amount of resources that it provides the student. For example, are students any more motivated to college enrollment and academic performance by a $400 scholarship than by a $400 loan, or a $400 reduction in tuition? This will be taken up in the next section. However, before trying to answer either of these questions it is necessary to give preliminary consideration to the significance of "details," i.e., the detailed specifications of alternative programs.

(a) The importance of "details".--The discussion of alternative forms of federal aid to higher education often centers around a debate over the merits of different general categories. For example, Wolk (1968) classified proposals and programs for federal assistance to higher education into five categories: (1) categorical aid--grants to institutions for specific purposes, (2) student aid, (3) grants to institutions--for broad or undesignated purposes, (4) tax relief, (5) revenue sharing and grants to states. Similarly, student aid can be broken down into several general subcategories: (1) grants, (2) loans, (3) work study programs, (4) tax relief schemes, and (5) tuition reduction and other forms of subsidized service.

One problem of grouping concrete proposals together under common sense categories is the implication that the effects of programs in the same general category are likely to be similar while the effects of programs in different categories will vary. Such an assumption can be quite misleading. There are limits to the extent that one type of program (e.g., aid to institutions) can produce the same effects as another type (e.g., tax relief). Nonetheless, different "types" of programs can have quite similar results. The extent to which the programs are similar or dissimilar depends in large part on the "details."

To illustrate this we will compare the current Educational Opportunity Program with the proposed Ribicoff Bill (1969). First, let us focus on the two programs in terms of their common categories and the general criticisms of each.

In one sense, scholarship programs are quite different from tax relief schemes but in another they are quite similar in that both are intended to provide college-aged youth with greater financial resources for college attendance. The critics of tax relief schemes point out that the results of the two types of programs are significantly different in terms of who gets what. The following table illustrates this point by showing that the current Opportunity Program helps primarily low income youth while the Ribicoff plan would help primarily upper income groups.

TABLE 3.2

DISTRIBUTION OF EDUCATION OPPORTUNITY GRANTS AND RIBICOFF TAX CREDITS BY INCOME QUARTILE OF STUDENTS' PARENTS, 1966-67

Income Quartile	Number Full-Time Students (thousands)	Opportunity Grants (millions)	Ribicoff Tax Plan* (millions)
High	1940	$1	524
Second	1145	6	301
Third	671	18	122
Fourth	302	33	0

*Hypothetical estimates.

Source: U.S. Office of Education, 1968, Tables 10 and A23.

On the other hand, it is possible for tax relief programs to distribute less of the benefits to upper income groups. For example, (1) granting 100 per cent of the first $350 in expenses, (2) less the amount of student aid grants in excess of $2,000, (3) less 15 per cent of the amount that the family incomes exceeds $6,000, and (4) refunds in cash to the extent that the higher education credit exceeds the tax owed, the distribution shown in Table 3.3 would result.*

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*Using the assumptions and figures on which the calculations in OE's calculations in OE's Students and Buildings (Froomkin, 1968) are based. See Tables 9 and A20. The empirical validity of some of these assumptions is questionable. The focus of this discussion, however, is on variations in "criteria" given similar assumptions, rather than predictions about the actual empirical outcome.

TABLE 3.3

THE DISTRIBUTION OF BENEFITS OF A HYPOTHETICAL TAX RELIEF SCHEME

Family Income Quartile	Average Tax Credit	Total Millions
High	0	$ 0
2nd	5	6
3rd	330	221
Low	350	105

What these criteria essentially do, of course, is turn the program into a combination of a tax credit scheme for those in the third quartile group, and scholarship grant scheme for the lower income quartile through a negative ircome tax, with virtually no benefits to those in the two top quartiles.

A second "detail" which needs to be taken into account is the probable reaction of institutions. If a plan like the Ribicoff Bill were enacted, the financial benefit to many in the upper income groups might be short-lived. Knowing that upper income groups have benefited most, institutions (especially private ones) might increase their tuitions and use the money for expanded student aid programs to lower income groups and to cover increasing operating costs. It is doubtful that such a reaction would be universal enough to offset fully the tax benefits, but the effect could be significant.

As we have seen, the general category or "form" of assistance is not as important as the details of a given program in determining which SES groups would benefit most. While nearly all forms of aid can have their detailed specifications changed so as to benefit any SES group desired, each one of these forms tends to already have a set of traditional detailed specifications. Congress might possibly enact programs with highly non-traditional detailed specifications, e.g., federal aid for lowering the tuition charged low income students, but requiring colleges to raise tuition for high income students. More likely, however, is the enactment of programs approximating traditional specifications, e.g., everyone paying the same low tuition. Consequently, it seems worthwhile to estimate which of these general categories is likely to benefit which SES groups most, assuming that the more or less traditional specifications are maintained. The next section will focus on how alternative types of programs with "traditional specifications" are likely to distribute financial assistance among varying socioeconomic groups.

(b) The distribution of resources.--The most extensive data concerning which SES groups benefit from different types of assistance programs are reported by Froomkin. His findings are reproduced in Table 3.4 (see page I-74), but before these data can be interpreted it is necessary to give a brief description of each program considered in the table.

1. Grant Programs

a) Institutional--this includes nonfederal scholarships, fellowships, loans and those portions of the work-study and educational opportunity grants (EOG) provided by the institution. Most of the money involved is committed to nonfederal scholarships.

b) Work-study program--provides part-time employment for low-income students with the federal government providing 80 per cent of the funds and the institutions the remainder.

c) EOG (educational opportunity grants)--federal grants up to $1,000 for each student are given to match scholarship funds awarded by the institution.

d) Veterans benefits--the "G.I. Bill" grants stipends for certain categories of veterans enrolled in educational programs.

2. Loans

a) National Defense Student Loans (NDSL)--a federal program which allows undergraduates to borrow up to $1,000 per academic year and up to a total of $5,000. The limits on graduate and professional students are $500 per year and a total of $10,000. The government furnishes 90 per cent of the funds with the institutions administering the program being responsible for collection.

b) Guaranteed Student Loan Program--the federal government guarantees to cover any defaults sustained by regular financial institutions on loans to students, and pays the cost of interest while the student is in school. During 1968 and 1969 high interest rates made the program virtually nonoperative because of a provision limiting interest to 7 per cent.

3. Proposed Programs

a) Ribicoff and Prouty tax credit (1969)--provides for a credit against taxes owed for expenditures on tuition, fees, and books, but not for living expenses: 75 per cent of the first $200, 25 per cent of $201-500, 10 per cent for $501-1,500. The amount of the credit is reduced by the amount of scholarship aid or veterans' benefits. Prouty proposes to give a refund--in effect a grant--of up to $100 to those who owe no taxes and to revise the schedule of computation to give proportionately greater credit to lower income persons.

b) One thousand dollar taxable grant to parents of college students--the idea is that lower income parents would receive proportionately more because of their lower tax bracket, while high income groups would lose most of the "grant" through taxes.

c) Federal scholarship according to need--essentially an extension of the EOG program to cover all students who have serious financial needs.

Table 3.4 clearly shows that the current scholarship programs ("institutional" and EOG) along with the work-study program benefit the lower income groups the most. The National Defense loans and veterans benefits are next. In contrast, the guaranteed student loan program and the proposals studied by Froomkin seem to aim their benefits at upper income groups.

TABLE 3.4

FUNDS DISBURSED UNDER CURRENT STUDENT AID PROGRAMS AND ESTIMATED COST OF PROPOSED PROGRAMS BY STUDENT FAMILY INCOME: 1966-67

(millions of dollars)

Quartile	Current Programs						Proposed Programs Amounts Net of Current Grants			
	Grant Programs				Loans					
	Institutional (1)	Work-Study (2)	EOG (3)	Veterans Benefits (4)	NDSL (5)	Guaranteed Loans (6)	Ribicoff Tax Credit (7)	Prouty Tax Credit (8)	$1,000 Taxable Grants to Parents (9)	Federal Scholarships According to Need (10)
High	14	6	1	32	40	139	524	256	1,214	-
Second	28	8	6	81	40	96	301	285	801	719
Third	77	36	18	24	72	73	122	143	445	667
Low	145	102	33	20	69	52	0	0	74	248
Total	264	152	58	157	221	360	947	684	2,534	1,634

Source: U.S. Office of Education, 1968.

Some additional data are available for the National Defense Student Loans, and are presented in Table 3.5. The indication is that these funds are definitely, and primarily, benefiting lower income groups.

TABLE 3.5

INCOME DISTRIBUTION OF FAMILIES OF NDSL BORROWERS COMPARED TO GENERAL STUDENT POPULATION
(In Percentages)

Families With NDSL Borrowers					Families With Dependent Members 14-34 Enrolled in College October, 1966		
Income Level	Year				Income Level		
	1965-66		1966-67				
Under $3,000	23		23		Under $3,000	3.7	
$3,000 - $5,999	31	49	29	46	$3,000 - $4,999	8.7	27.4
$6,000 - $7,499	18		17		$5,000 - $7,499	18.7	
$7,500 - $11,999	22	26	25	29	$7,500 - $9,000	17.8	43.2
$12,000 - $14,999	4		4		$10,000 - $14,999	25.4	
$15,000 or more	2		2		$15,000 and over	16.0	
					Not reported	9.8	
Total %	100		100		Total %	100.0	

Sources: Notes and Working Papers . . . Under Student Financial Assistance Statutes, 1968.

U.S. Bureau of the Census, 1969e.

None of the above data deal with the most widespread form of cost-reduction--low tuition, publicly supported colleges. Two recent sources of data are available showing who benefits from low tuition. The first is from the Feldman and Hoenack (1969b: 394-395) study and has already been reviewed. It is worthwhile, however, to quote their conclusions about this matter:

> Most persons familiar with State, College and University systems often hear as a justification for low tuition that such a tuition policy opens up access to higher education to low income students. Yet the readers can see [from the data summarized earlier] that a decrease in the level of tuition charged at four year public institutions would attract more students from relatively high income families than from relatively low income categories. If the objective is to bring more of the relatively low income students into college a policy of differentially pricing education for students of equal ability, but different family income is more appropriate.

In a recent study of California public higher education, Hansen and Weisbrod found that not only does tax supported low tuition encourage enrollments by the upper income groups more than by those with lower incomes, but that both the relative and absolute financial subsidies are higher for the upper income groups. Table 3.6 and 3.7 reproduce their essential findings. Table 3.6 shows that those who attend junior colleges--students who tend to come from lower income groups--received a subsidy of $1,050, or 12 per cent of their average income. The subsidies received by those attending senior colleges and the University of California are $3,810 and $4,870 respectively, which is both more absolutely and a higher percentage of the family incomes of those individuals--even though their incomes are higher to begin with. Moreover, Table 3.7 shows that this is not a matter of the upper income groups getting more back because they paid more in taxes. On the contrary, families with a student in junior college received a subsidy

TABLE 3.6

AVERAGE FAMILY INCOMES FOR ALL FAMILIES, AND FOR FAMILIES WITH AND WITHOUT CHILDREN IN PUBLIC HIGHER EDUCATION, AND AVERAGE HIGHER EDUCATION SUBSIDIES RECEIVED BY THE LATTER FAMILIES, BY TYPE OF INSTITUTION CHILDREN ATTEND: CALIFORNIA, 1964

	All Families	Without Children	With Children			
			Total	JC	SC	UC
Average family income*	$8,000	$7,900	$9,560	$8,800	$10,000	$12,000
Average higher education subsidy per year**						
a. Amount in dollars	--	--	880	720	1,400	1,700
b. Per cent of line 1	--	--	9	8	14	13
Average number of years higher education completed	--	--	1.7	1.2	2.6	2.8
Average total higher education subsidy***						
a. Amount in dollars	--	--	1,700	1,050	3,810	4,870
b. Per cent of line 1	--	--	18	12	31	41

*Median incomes from Table IV-7 (Hansen and Weisbrod, 1969).

**Average subsidies are based on the distribution of enrollments by year of school and on distribution of enrollment by type of institution.

***Average number of years and average subsidies are based on the assumption that entering students progress through the various types of institutions as shown in Table IV-5 (Hansen and Weisbrod, 1969), and that the various subsidies are those shown in Table IV-3 (Hansen and Weisbrod, 1969).

Source: Hansen and Weisbrod, 1969.

TABLE 3.7

AVERAGE FAMILY INCOMES FOR ALL FAMILIES, AND FOR FAMILIES WITH AND WITHOUT CHILDREN IN PUBLIC HIGHER EDUCATION, AVERAGE HIGHER EDUCATION SUBSIDIES RECEIVED BY THE LATTER FAMILIES, AND AVERAGE STATE AND LOCAL TAXES PAID BY ALL FAMILIES, BY TYPE OF INSTITUTION CHILDREN ATTEND: CALIFORNIA, 1964

	All Families	Without Children	With Children			
			Total	JC	SC	UC
Average family income*	$8,000	$7,900	$9,560	$8,800	$10,000	$12,000
Average higher education subsidy per year**	--	--	880	720	1,400	1,700
Average total state and local taxes paid***	620	650	740	680	770	910
Net transfer (line 2 - line 3)	--	-650	+140	+40	+630	+790

*From Table IV-7 (Hansen and Weisbrod, 1969).

**From Table IV-8 (Hansen and Weisbrod, 1969).

***Total state and local tax rates from Table IV-11 (Hansen and Weisbrod, 1969) were applied to the median incomes for families in each column.

Source: Hansen and Weisbrod, 1969.

of $40 per year over state and local taxes, those with a student in a senior college $630, and those with a student in the university $790.

It is difficult to know the extent to which this situation applies to the whole country. However, as time goes on the national situation will probably approximate California more and more. That is to say, California has an unusually high proportion of its students in public colleges in general and junior colleges in particular. The national trends are definitely in that direction (Jaffe and Adams, 1969: 37-40). Moreover, the relatively higher expenditure per student at four year colleges and universities is a national phenomenon. Consequently, we can reasonably assume that the distributional effects of publicly supported, low tuition in California are a good indicator of the future national situation.

(c) Differential effects on the motivation to attend college.-- In the preceding section we attempted to estimate the relative impact that alternative support systems would have on the socioeconomic distribution of students through providing financial assistance. Now we want to discuss briefly the relative effect that the alternatives might have on increasing or decreasing the motivation to attend college, and performance during college.

It seems obvious that grants will be more attractive than loans or part-time work. That is, if a high school graduate has financial problems and is wavering about going to college, he is more likely to make the leap if offered a scholarship than if he is offered a loan or part-time work.

But of much more interest is the effect that these alternative forms of aid may have on his self image, motivation, and performance. Several seasoned observers of the academic scene believe that the primary effect or function of scholarships is not the financial aid they provide, but as symbols of approval and encouragement. Jencks and Reisman (1968: 139-140) cbserve:

> . . . we are inclined to suspect that the main importance of money to most students today is symbolic. We have frequently been astonished to hear students explain that they decided to attend one college rather than another because they "got a better offer" from it. In most cases this turns out to mean that the college where they finally went offered them $100 or $200 more scholarship help than the others they were considering. Or it may mean they were offered a scholarship at one place whereas they would have had to take a $500 loan at another. These same students may later mention that the college they picked actually charges more tuition than the ones they rejected, so that the difference in actual outlay is nil.
>
> Only in this context can one begin to understand why most colleges, despite considerable criticism from professionals in the financial aid business, continue to offer lots of small scholarships that cannot possibly be of real use to a poor boy instead of a few big ones that might make the difference between attending college and not attending. The small scholarships are not meant to help the needy; they are offered to middle-class students whom the college wants to recruit and whom it fears will go elsewhere if they don't receive some token of the college's esteem.

Howard R. Bowden (1968: 12), president of the University of Iowa and former president of Grinnell College, has come to a similar conclusion.

An important question in our context is whether the symbolic awards of scholarships can be used not only to lure able students to one school rather than another, but also to increase the motivation and performance of students of varying backgrounds and abilities. Obviously, if everyone received a scholarship the symbolic value would be lost. But it is possible that the proportion of students receiving scholarships could be increased considerably without this happening--especially if specific efforts were made to accentuate their symbolic effect. This might be accomplished through a variety of mechanisms: news releases to the recipients' hometown newspapers, awarding gold keys or medals, ceremonies of public recognition, etc. There is research on the factors influencing educational aspirations that suggests this line of argument may be valid. For example, Jaffe and Adams (1969: 71f) found that a key influence on aspirations was whether students had a favorable image of themselves. Supposedly, receiving a scholarship with significant public recognition would tend to produce favorable self images. However, the few studies that have focused on the effects of scholarships find little evidence of better performance when controls are made for initial ability (Nash, forthcoming). Consequently, further research is required to resolve the issue.

(d) Summary.--In summary, several things can be said about the relative merits of various alternative forms of federal aid. First, the consequences of a program are primarily dependent upon the detailed specifications of the program rather than on the general category (tax relief, student aid, grants to institutions, etc.) under which the program is classified. Therefore, the distribution of benefits (among SES categories, for example) can be varied by changing the "details" of the program.

Second, while it is possible to vary the details of different general categories of aid, there tends to be a more or less traditional set of specifications connected with each type of program. Third, assuming that the traditional sets of detailed specifications are adopted, scholarships based on need, National Defense type loans, and work study programs definitely distribute additional resources to those from lower income groups. In contrast, the guaranteed loan program, tax relief schemes and low tuition have the opposite effect, i.e., more benefits are made available to upper income groups than to lower income groups. Consequently, it seems likely that only the first three types of programs are likely to contribute significantly to equality of opportunity.

Fourth, scholarships may have the additional advantage of stimulating a student's motivation and performance by raising his self image. This effect could be increased through special efforts to bring public recognition to scholarship recipients.

Up to this point the discussion of the advantages and disadvantages of alternative forms of aid has focused on empirical questions: (1) to which SES groups will the financial benefits be distributed, and (2) what will be their effect on the student's motivation to continue his education. But there are also issues of social justice relevant to choosing between tax cuts, tuition reduction and grants on the one hand and loans and work programs on the other. The first three programs involve "giving" people something while the other two programs require the recipient to work for what he gets or to pay it back at a later date. Arguments can be made for either alternative. A not uncommon argument is that it is demoralizing to people to receive "something for nothing." On the other hand--and this is often overlooked--the children of high SES families whose parents pay the bill for college just as clearly receive "something for nothing" as do the recipients of government grants. Consequently, an important value judgment involved in the selection of alternative means is whether low SES students should be expected to repay the cost of money invested in them while upper income students (who are given money by their parents) are expected to repay nothing. It could be argued that certain "realisms" of the situation, e.g., the scarcity of resources available for student aid, would make helping more people through loans and work programs a greater contribution to social justice than to help fewer people through grants. The job of the policy researcher is not to resolve these moral questions, but to point out and clarify the issues involved.

d. Summary of the argument.--Our thesis is that while some forms of federal aid will affect social mobility to a limited degree, no form of aid is going to change the patterns of mobility sufficiently to have significant effects on either equality of opportunity or equality in the societal stratification system. Up to this point we have traced two lines of argument to support this thesis.

First (chapter 2), we have seen that SES affects not only the transition from high school to initial college enrollment, but that it continues to influence an individual's life chances throughout the higher education process. Once conclusion that we draw from this is that even if student aid significantly increased the enrollment rates of lower SES students this would not nearly equalize their chances in terms of total educational, occupational and income attainment.

The second line of argument (chapter 3) is concerned with how much reducing the cost of higher education and improving recruiting and counseling services would increase lower SES enrollments and overall educational attainments. Most studies suggest that they would have very little impact. One more recent analysis suggests that such aid would at least increase initial enrollments, and undoubtedly increase the number of lower SES individuals who received some type of college education. The most we can say at this point is that it would help "some," but we do not know how much. Among alternative forms of aid, however, scholarships based on need would clearly help the most, tax relief and lowered tuition the least (and they might even increase inequality), and loans and work programs would fall in between.

4. Educational Attainment, Mobility, Opportunity, and Equality

a. Elaboration of the argument.--Now we are ready to present a third line of agrument. In this chapter we are going to look at historical trends in educational attainment and opportunity and compare these with historical trends in social mobility and equality in the societal stratification structure. In essence, the findings are that while there have been large increases in educational attainment for all SES groups, some equalizing of the distribution of the years of schooling, and dramatic changes in the occupational structure, social mobility and the distribution of income have remained practically unchanged. We would be very hesitant to base any conclusions on the comparisons of such gross trends if we had not in previous sections examined some of the intervening social processes and found that there is at least a serious question as to whether they will be efficacious in bringing about changes in the relative educational attainment of varying socioeconomic classes. Our argument here is that using federal aid primarily to expand college enrollments--even of low SES students--is another round in the long history of expanding education with the prospect of increased opportunity and equality used as part of the justification for this expansion. While such expansion has undoubtedly had other effects on American society,* the evidence does not show that it has significantly increased social mobility or equality.

b. Educational attainment and mobility.--We will consider the evidence in the order of its assumed causal relationship: educational attainment and mobility, occupational distribution and mobility, and income distribution. We will focus primarily on the last generation.

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*To cite only one example, higher levels of formal schooling have undoubtedly increased the skills of the work force to some extent and contributed to increased economic productivity--though, as we will argue later, this effect is often overemphasized.

The educational attainment figures which seem most relevant are the proportions of different age cohorts which attain various levels of education.* Data covering approximately the last 35 years are presented in Table 4.1. We find the expected: with few exceptions, e.g., high school graduation and college entrance during World War II, attainment rates of subsequent cohorts have steadily increased. Moreover, the rate of increase in the percentage of a cohort attaining the various levels (e.g., high school graduation, college graduation, etc.) seems relatively constant until a ceiling effect sets in because of the high percentage of the cohort that has attained that level.

When we consider educational mobility, the primary source of data available is that collected in a 1962 Current Population Survey of the Census Bureau. In Spady's analysis of these data (1967: 277), he presents Gamma coefficients for the relationship between father's and son's education for four age cohorts which cover a period of forty years. The same data are used by Blau and Duncan (1967: 178) in their study of the U.S. occupational structure, and they give correlation coefficients for both the relationship between father's education and son's education and father's

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*Measures of central tendency for the total population over time reflect the effects of variations in the size of different age cohorts, i.e., the birth and death rates, as well as changes in educational attainment. Such figures would actually make our argument seem stronger since the youngest cohorts (who had completed school) would be both larger and have the highest rates of attainment and therefore "inflate" increases in measures of the central tendency for the whole population.

TABLE 4.1

ESTIMATED RETENTION RATES,* 5TH GRADE THROUGH COLLEGE ENTRANCE, IN PUBLIC AND NONPUBLIC SCHOOLS: UNITED STATES, 1924-32 to 1959-67

School Year Pupils Entered 5th Grade	Retention Per 1,000 Pupils Who Entered 5th Grade								High School Gradu-ates	Year of High School Graduation	First Time College Students
	5th Grade	6th Grade	7th Grade	8th Grade	9th Grade	10th Grade	11th Grade	12th Grade			
1	2	3	4	5	6	7	8	9	10	11	12
1924-25	1,000	911	798	741	612	470	384	344	302	1932	118
1926-27	1,000	919	824	754	677	552	453	400	333	1934	129
1928-29	1,000	939	847	805	736	624	498	432	378	1936	137
1930-31	1,000	943	872	824	770	652	529	463	417	1938	148
1932-33	1,000	935	889	831	785	664	570	510	455	1940	160
1934-35	1,000	953	892	842	803	711	610	512	467	1942	129
1936-37	1,000	954	895	849	839	704	554	425	393	1944	121
1938-39	1,000	955	908	853	796	655	532	444	419	1946	**
1940-41	1,000	968	910	836	781	697	566	507	481	1948	**
1942-43	1,000	954	909	847	807	713	604	539	505	1950	205
1944-45	1,000	952	929	858	848	748	650	549	522	1952	234
1946-47	1,000	954	945	919	872	775	641	583	553	1954	283
1948-49	1,000	984	956	929	863	795	706	619	581	1956	301
1950-51	1,000	981	968	921	886	809	709	632	582	1958	308
1952-53	1,000	974	965	936	904	835	746	667	621	1960	328
1954-55	1,000	980	979	948	915	855	759	684	642	1962	343
1956-57	1,000	985	984	948	930	871	790	728	676	1964	362
1958-59***	1,000	985	978	960	940	906	838	782	717	1966	394
1959-60***	1,000	990	983	976	966	928	853	785	721	1967	400

*Rates for the 5th grade through high school graduation are based on enrollments in successive grades in successive years in public elementary and secondary schools and are adjusted to include estimates for non-public schools. Rates for first-time college enrollment are based on data supplied to the Office of Education by institutions of higher education.

**Retention rates not calculated because of the influx of veterans in institutions of higher education.

***Preliminary data.

Source: U.S. Office of Education, 1969b: 7.

occupation and son's education. Both sets of data are presented in Table 4.2. While there are minor fluctuations over time, the overall impression that the data leave is one of little change. Blau and Duncan (1967: 179) note one exception to this: the relationship between SES background and educational attainments seems to have decreased for the cohort that graduated from high school during the late 1920's and early 1930's, but they are unable to suggest a plausible interpretation.

TABLE 4.2

MEASURES OF THE RELATIONSHIP BETWEEN FATHER'S SES
AND SON'S EDUCATIONAL ATTAINMENT,
BY AGE OF SONS: 1962

Son's Age	Son's Education X Father's Education (γ)*	Son's Education X Father's Education (r)**	Son's Education X Father's Occupation (r)**
55-64	.507	.409	.392
45-54	.470	.373	.428
35-44	.482	.424	.440
25-34	.513	.416	.411

*Spady, 1967: 276.

**Blau and Duncan, 1967: 178.

They suggest another interpretation, however, that is worth quoting:

> It may be sheer coincidence that both r_{ux} [son's education by father's occupation] and r_{uv} [son's education by father's education] show the highest value for the 33-45 cohort. This cohort happens to be the one with by far the largest proportion (roughly three quarters) of its members who were veterans of World War II. Sociologists have sometimes speculated that the availability of educational benefits in the "G. I. Bill" may have equalized opportunities for men coming from different socioeconomic backgrounds. The present data contain no hint of such an equalization effect, which would have reduced r_{uv}, not enhanced it. (1967: 179)

The same data have been analyzed in even more detail by Beverly Duncan (1967). She divides the sample into seven five-year cohorts and analyzes the effects of five background factors on educational attainment: (1) family head's education, (2) family head's occupation, (3) whether the family was intact or broken, and (4) the number of siblings. She found that these background factors accounted for about 30 per cent of the variance in educational attainment. Moreover, with one possible exception* no trend could be detected concerning the effects that these factors have on education. That is, their effect was roughly constant over time. If the expansion of public education had increased "equality of opportunity," these relationships should have become weaker, not remained constant.

It must be added that the distribution of years of schooling has been equalized over time. That is, the distance between the least educated and the best educated has decreased. Jencks and Reisman (1968: 83f) present the data on this distribution derived from Census figures (Table 4.3). As they point out, this distribution refers to years of schooling, and clearly the later years of school cost many times more than earlier ones. Therefore, they conclude that while there are no reliable data, the distribution of educational resources has probably been equalized considerably less than the years of schooling. On the basis of crude calculations, they guess that it has remained about stable.

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*It appears that the negative effect of growing up in a broken family may have decreased over time.

TABLE 4.3

PERCENTAGE SHARES OF TOTAL YEARS OF SCHOOLING OBTAINED BY BEST- AND WORST-EDUCATED TWENTIETHS AND THIRDS OF U.S. MALES: 1875-1934

Year of Birth	Top 20th	Bottom 20th	Top 3rd	Middle 3rd	Bottom 3rd	Total
1930-34	8	1	43	35	22	100
1910-14	9	1	46	34	20	100
1875-85*	12	**	53	34	13	100

*Includes all those alive and over seventy-five in 1960.

**Less than 0.5 per cent.

Source: Jencks and Reisman, 1968: 831.

c. Occupational mobility.--When we look at the occupational structure and intergenerational occupational mobility, a similar picture emerges. It is clear that over time a greater and greater percentage of the population has shifted into the higher status occupations. (For trends from 1950-67, see U.S. Statistical Abstract, in 1968, Table 325, p. 226.) The meaning of this in terms of equality, however, is open to question. What does seem clear from the recent study of Blau and Duncan (1967) is that the rate of social mobility has remained quite stable over the last forty years. Table 4.4 gives the simple correlation coefficients between father's occupation and son's first job. Blau and Duncan comment that "as far as career beginnings are concerned, the influence of social origins has remained constant since before World War I" (1967: 111).* They conclude that a graduate can apply for kinds of jobs that usually are not even open to one with just a high school diploma.

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*It should be pointed out that the major effect of education is on career beginnings. That is, probably the largest effect of a college degree is

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that there is no evidence of "rigidification." The opposite conclusion seems equally warranted: there seems to be no evidence of increased equality of opportunity. We will return later to a consideration of the significance of education for changes in the occupation structure.

TABLE 4.4

SIMPLE CORRELATIONS BETWEEN FATHER'S OCCUPATIONAL STATUS AND STATUS OF SON'S FIRST JOB FOR FOUR AGE GROUPS OF NONFARM MEN: 1962

Son's Age: 1962	Father's Occupation X Son's Occupation
55-64	.384
45-54	.388
35-44	.377
25-34	.380

Source: Blau and Duncan, 1967: 110.

d. Distribution of income and wealth.--Little needs to be said about the trends in income distribution except to repeat the well known fact that the distribution of income has remained more or less constant since shortly after World War II. The data for the period 1947-1966 are shown in Table 4.5.*

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*For an extensive discussion of trends in income distribution, see Miller, 1966.

TABLE 4.5

PERCENTAGE SHARE OF AGGREGATE INCOME IN 1947, 1950, AND 1956 TO 1967, RECEIVED BY EACH FIFTH OF FAMILIES AND UNRELATED INDIVIDUALS, RANKED BY INCOME: FOR THE UNITED STATES

Income Rank	1967	1966ʳ	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1950	1947
Families															
Per cent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lowest fifth	5.4	5.5	5.4	5.3	5.2	5.1	5.1	4.8	4.9	5.0	5.1	5.0	5.0	4.5	5.0
Second fifth	12.2	12.4	12.3	12.1	12.0	12.0	12.0	11.7	12.0	12.1	12.4	12.6	12.4	12.0	11.8
Middle fifth	17.5	17.7	17.7	17.7	17.7	17.6	17.5	17.4	17.6	17.7	17.9	18.1	17.8	17.4	17.0
Fourth fifth	23.7	23.7	23.7	23.7	24.0	23.9	23.7	23.6	23.6	23.7	23.7	23.8	23.7	23.5	23.1
Highest fifth	41.2	40.7	41.0	41.3	41.1	41.4	41.7	42.6	42.0	41.4	40.9	40.5	41.2	42.6	43.0
Top 5 per cent	15.3	14.8	15.3	15.8	15.7	16.0	16.3	17.1	16.8	16.3	15.8	15.7	16.3	17.0	17.2
Unrelated Individuals															
Per cent	100.0	(NA)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lowest fifth	3.0	(NA)	2.8	2.6	2.4	2.4	3.0	2.6	2.6	2.3	2.4	2.6	2.7	2.3	1.9
Second fifth	7.5	(NA)	7.5	7.6	7.1	7.3	7.4	7.0	7.1	6.9	7.0	7.3	7.3	7.0	5.8
Middle fifth	13.3	(NA)	13.2	13.5	12.8	12.7	12.7	13.0	13.6	13.0	13.1	13.7	13.6	13.8	11.9
Fourth fifth	24.4	(NA)	23.8	25.1	24.5	24.6	24.1	24.2	25.7	24.2	25.1	25.4	25.3	26.5	21.4
Highest fifth	51.8	(NA)	52.7	51.2	53.1	53.0	52.8	53.3	50.9	53.5	52.5	51.1	51.1	50.4	59.1
Top 5 per cent	22.0	(NA)	22.5	20.2	22.6	21.2	21.1	22.7	20.0	22.8	21.4	19.8	20.3	19.3	33.3

NA percentage share of aggregate income not calculated for unrelated individuals because detailed distribution not available.

ʳBased on revised methodology.

Source: U. S. Bureau of the Census, 1969a.

Two other things should be kept in mind with respect to the degree of inequality indicated by the income distribution. First, a more important indicator of the degree of social inequality would be the distribution of wealth. Systematic long-term trend data are not available, but the distribution of personal wealth is probably much more unequal. (If for no other reason this assumption seems justified on the basis of the economic principle that upper income groups save a higher proportion of their income than lower income groups.) Secondly, it seems reasonable to assume that, except for possibly the most wealthy, passing on wealth is easier than passing on high occupational status not based on inherited wealth. To give an example, the probabilities that a businessman of moderate wealth can pass his assets on to his heir are higher than the probabilities of a college professor, minister, or judge being able to pass his occupational status on to his children.

In conclusion, the past expansion of education has had little effect on mobility, and consequently the degree of inequality and inequality of opportunity have remained roughly constant. The two previous conclusions were that socioeconomic background continues to affect achievement significantly after college enrollment, and that expanded student aid will have at best a moderate effect on lower class college enrollment. When we link these three conclusions together it seems much more reasonable to assume that the expansion of student aid programs will have little effect on opportunity and equality than to assume the opposite. For some time we have been pushing on the rock that is the stratification system with the long limber rod of educational opportunity. Given the lack of movement up to now, it seems doubtful that pushing a little harder will make much difference in the future.

B. Racial Inequality: Trends in Racial Inequality and the Effects of Expanded Opportunities for Higher Education

5. Trends in Racial Inequality

a. Introduction.--In Section A, the argument was made that federal aid to higher education--primarily in the form of financial aid to students and recruitment counseling programs--will do relatively little to equalize the opportunities available to those from differing socioeconomic backgrounds. Now we turn to the question of whether federal aid to higher education will help to reduce racial inequality--and a seeming paradox presents itself. Here the argument will be the opposite of the one preseated in Section A concerning class inequality. That is, we will argue that federal aid can, over the long run, significantly help to raise the educational, occupational, and income levels and improve the life chances of black* Americans. In this chapter and the next we will present data to support this line of argument. At the end of the next chapter we will attempt to present the theoretical basis for resolving the apparent contradiction.

In Section A we saw that even if student financial aid is effective in increasing college attendance for lower class high school graduates, this gain is offset by a series of countervailing social processes within the larger educational and occupational structure. Consequently, in our consideration of racial equality we will look at these "larger" societal processes first. After we have examined the context and the limits it sets on the movement toward racial equality, we will take up the question of the effects of student aid for black college students.

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*In this paper "black" and "Negro" are used interchangeably. When "nonwhite" is used its meaning is identical to the definition used by the U. S. Census: "The nonwhite group includes Negroes, Indians, Japanese, Chinese and other nonwhite races" (U. S. Bureau of the Census, 1969a: 9).

b. Overview of the argument.--Our argument is based on the observation that the expansion of subsidized education--whether it be through low tuition state schools or scholarships and loans to individual students--has allowed Negroes to increase their levels of education at a rate considerably faster than that of whites. This is in contrast to lower class whites who have been able to increase their absolute level of education, but not at a rate fast enough to close the gap significantly and overtake members of the upper class. The second key point of the argument is that racial discrimination in the job market seems to be decreasing fairly rapidly--at least for black college graduates--thereby enabling Negroes with higher educations to obtain jobs similar as to status and income to those held by whites with the same levels of education. To state it another way, blacks are increasingly able to translate gains in higher education into gains in occupational status and income.

This chapter will focus on the extent to which the gap between blacks and whites--with respect to education, occupation, and income--has been reduced, and discusses the implications that has for further reductions. The next chapter will deal with the relationship between these three variables, and attempt to indicate the extent to which Negro gains in education are likely to produce gains in occupational status and income. Chapter 7 discusses the probable effects of student aid on college enrollment and attainment for black students. Finally, chapter 8 looks at the problem from a different perspective by attempting to estimate the effects of lowering academic requirements for students from underprivileged backgrounds. That is, instead of asking what can be done to help disadvantaged students progress through the existing education-certification system, the focus is on how this system might be modified in order to make it easier for these students to obtain the level of educational certification they desire--and the probable results of such modifications.

c. Current inequality: the gap.--While the fact that Negroes are underpriviledged relative to whites hardly needs to be substantiated, it is appropriate to set the context for our discussion by briefly reviewing some of the data which show the magnitude of this difference. The median income of white families in 1968 was $8,937 while the median for blacks was $5,360, or 60 per cent of the white median. The income distribution for whites, nonwhites and blacks for 1967 is shown in Table 5.1.

The occupational distribution for employed persons in 1968 is shown in Table 5.2. The index of dissimilarity is 32.5, which means that this per cent of either the whites or nonwhites would have to change occupational categories in order for the two groups to have the same distribution.* This index actually understates the degree of inequality suffered by blacks since whites are compared with nonwhites rather than Negroes. Moreover, blacks usually hold the lower status jobs within the broad occupational categories on which the index is based. This is partially reflected in the even greater difference in median income indicated above.

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*An index of 100 would mean that there was complete occupational segregation: no whites would be in occupations held by nonwhites and vice versa.

TABLE 5.1

INCOME DISTRIBUTION OF HOUSEHOLDS IN 1967, BY RACE

(Excludes inmates of institutions; includes 1,067,000 members of the Armed Forces in the United States living off post or with their families on post but excludes all other members of the Armed Forces. Number of households as of March 1968.)

Total Household Income	Total	White	All Nonwhite	Negro Only
Total Number (thousands)	60,446	54,188	6,258	5,728
Median Income (dollars)	7,181	7,485	4,559	4,359
Mean Income (dollars)	8,192	8,485	5,656	5,397
Under $1,000	4.6	4.2	8.3	8.7
$1,000 to $1,499	4.2	3.8	7.1	7.5
$1,500 to $1,999	3.8	3.6	5.9	6.3
$2,000 to $2,499	3.9	3.5	7.2	7.5
$2,500 to $2,999	3.2	2.9	5.4	5.4
$3,000 to $3,499	3.6	3.3	6.1	6.4
$3,500 to $3,999	3.2	3.0	4.7	4.7
$4,000 to $4,999	6.6	6.3	9.3	9.4
$5,000 to $5,999	7.6	7.4	9.2	9.6
$6,000 to $6,999	7.8	7.9	7.3	7.3
$7,000 to $7,999	8.0	8.2	6.0	5.8
$8,000 to $8,999	7.4	7.7	4.8	4.5
$9,000 to $9,999	6.2	6.4	3.9	3.6
$10,000 to $11,999	10.3	10.8	5.9	5.6
$12,000 to $14,999	9.1	9.7	4.4	4.0
$15,000 to $24,999	8.3	8.9	3.6	3.0
$25,000 to $49,999	1.9	2.0	0.7	0.4
$50,000 and over	0.3	0.3	0.1	0.1
Total	100.0	100.0	100.0	100.0

Source: U. S. Bureau of the Census, 1968b.

TABLE 5.2

OCCUPATIONAL DISTRIBUTION OF EMPLOYED PERSONS, BY COLOR: 1968

Occupation	Whites	Nonwhites
Professional	14.3	7.8
Managers	11.1	2.8
Clerical	17.5	11.8
Sales	6.6	1.9
Craftsmen	13.8	8.0
Operatives	17.7	23.7
Nonfarm laborers	4.0	10.7
Private household workers	1.4	9.5
Other service workers	9.0	18.8
Farmers	2.7	1.2
Farm laborers	1.8	3.7
Index of dissimilarity	32.5	

Source: U. S. Bureau of the Census, 1969h: 223.

With respect to educational attainment as measured by years of schooling, the differences are not as great, though still significant. The median years of schooling in 1968 for individuals 25 and over was 12.1 for whites and 9.3 for Negroes, i.e., the Negro median was 77 per cent of the white median. For younger generations, however, the attainments were much more similar. For those 22-24 years old the white median was 12.7 vs. 12.2 for blacks. For the 25-20 age cohort the figures were 12.6 and 11.6. With respect to higher education as such, the gap is considerable even for younger age groups as indicated by the data in Table 5.3.

TABLE 5.3

PERCENTAGES OF WHITES AND NEGROES IN SPECIFIED AGE GROUPS WITH ONE OR MORE YEARS OF COLLEGE AND THE RATIO OF NEGRO TO WHITE PERCENTAGES: MARCH 1969

Age	Whites	Negroes	Ratio
20-21	40.1	21.2	51.6
22-24	35.7	19.1	53.4
25-29	32.1	15.7	48.9

Source: U. S. Bureau of the Census, 1969g: 9.

Not unexpectedly, we see that the most recent data clearly show that Negroes are significantly underprivileged with respect to income, occupational status and educational attainment. As Tucker (1969: 343-345) has pointed out, these disparities are actually understated because of differences in the age distribution of the population. For example, when the 1960 Census data are standardized for age, the median incomes for nonwhites with various levels of education are up to 15 per cent lower than the unstandardized medians.

d. The trend: is the gap closing?--We have stated that the first point of the argument is that Negroes have been able to increase their level of education, occupation and income at a faster rate than whites so that there has been a significant reduction in racial inequality--in contrast to the trends with respect to class inequality. Before we review the data relevant to this line of argument it is necessary to qualify and elaborate this thesis.

As we shall see, while Negroes have raised the absolute level of their income considerably there has been relatively little change in the white-black income gap until quite recently, and even now gains are small. The same is true for occupational status though the gap has been reduced somewhat more than with respect to income.

The same pattern seems to hold for education when we look at the whole population, though the gains have been slightly greater than for income and occupation. However, when we examine the changes that have occurred in the younger cohorts who have just completed their education the picture is much more optimistic with respect to median levels: about 90 per cent of the gap that existed in 1950 has been eliminated and the Negro median is now 96 per cent of the white median. These gains do not seem to hold, however, at the college level for those who have completed their college work in the last five to ten years. There is some evidence that those Negroes who are now in college are beginning to make the gains that were made primarily at the high school level in earlier years.

One possible interpretation of these findings is that after World War II Negroes were able to make rapid gains in education at those levels where free education was widely available and socially expected, but were unable to do so at the college level where this was not so. The apparent gains of those now in college could reflect quite recent efforts by the Federal government to make higher education more easily available to the underprivileged. Because our focus in this section is on whether Negroes have been able to gain on whites rather than why, such an interpretation is not essential to this part of the argument. We will return to it when, in the last section of the chapter, we focus on the question of whether more aid to students will increase the educational attainments of blacks.

The primary point of this section is that, for the younger age groups, very significant gains have been made in reducing the degree of educational inequality between blacks and whites at the precollege level, and that this process seems now to be underway in the higher education system. Moreover, there is some evidence that these educational gains are beginning to affect occupations and incomes. Later we will elaborate on why the impact in these areas is expected to increase even more significantly in the future. Now we turn to a review of the data on which the above line of argument is based.

(1) Income.--Prior to 1965, income figures were usually tabulated for nonwhites rather than Negroes per se. The longer term trends based on comparisons of white and nonwhite family income are presented in Table 5.4. White and Negro comparisons are available for more recent years and these are shown in Table 5.5.

While the figures for the longer time period indicate that nonwhites are able to raise their incomes faster than whites--a 319 per cent increase versus a 262 per cent increase for the twenty year period--clearly most of these gains have occurred very recently. In 1947 nonwhites had a median income which was 51.1 per cent of the white median income. In 1963 it was 52.9 per cent, an improvement of only 1.8 per cent in 16 years.

TABLE 5.4

MEDIAN FAMILY INCOMES* OF WHITES AND NONWHITES, AND NONWHITE INCOME AS A PERCENT OF WHITE INCOME: 1947-1967

Year	Median Income**		Ratio of Nonwhite to White
	White	Nonwhite	
1947	3157	1614	51.1
1950	3445	1869	54.3
1956	4993	2628	52.6
1957	5166	2764	53.5
1958	5300	2711	51.2
1959	5643	2917	51.7
1960	5835	3233	55.4
1961	5981	3191	53.6
1962	6237	3330	53.4
1963	6548	3465	52.9
1964	6858	3839	56.0
1965	7251	3994	55.1
1966+	7792	4674	60.0
1967	8274	5141	62.1
Per cent increase 1947 to 1967	262%	319%	

*Families only, does not include unrelated individuals.

**Current dollars.

+ Revised figures for 1966.

Source: U. S. Bureau of the Census, 1969a: Table 1, 21.

TABLE 5.5

MEDIAN FAMILY INCOME OF WHITES AND NEGROES, AND NEGRO INCOME AS A PER CENT OF WHITE INCOME: 1965-1968

Year	Median Family Income (Dollars)		Ratio of Negro to White
	White	Negro	
1965	7251	3886	54
1966	7792	4506	58
1967	8274	4919	59
1968	8937	5360	60

Source: U. S. Bureau of the Census, 1969g: 4.

In more recent years progress has been faster with a shift from 52.9 per cent in 1963 to 62.1 per cent in 1967. Nonetheless, in the 17 years from 1950 to 1967 only about 17 per cent of the original gap had been removed.*

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*That is, in 1950 the nonwhite median income was 54.3 per cent as high as that for whites. This means there was a relative gap of 45.7 per cent (100 minus 54.3). By 1967, nonwhite income was 62.1 per cent of whites. In the 17 year period 7.8 per cent (62.1 minus 54.3) or 17 per cent of the original 45.7 gap had been eliminated. Nonwhites had increased their incomes by over 270 per cent during this period, but whites had of course also made large increases--about 240 per cent--so that the relative gap between the two groups was reduced by only 17 per cent. (The same procedure will be used to estimate decreases in the gap for occupation and education.)

The more recent figures for Negroes per se (Table 5.5) show approximately the same thing except the absolute and relative position of Negroes is, of course, lower than that of all nonwhite combined.

In summary, until five or six years ago there had been virtually no permanent reduction in the relative gap between white and Negro income since World War II, though of course both groups had steadily increased the absolute level of their income. In the last five years there has been a steady decrease in the gap between whites and blacks. (The reasons behind such a decrease will be considered in the next chapter.)

(2) Occupation.--When we look at occupational attainment the picture is approximately the same. Table 5.6 shows the occupational distributions of whites and nonwhites for selected years between 1950 and 1967. For the years between 1950 and 1960 we see that occupational opportunities for nonwhites first improved and then worsened. In 1950, the index of dissimilarity was 41.0. It decreased to 39.9 in 1955, but by 1960 had increased to 42.6. In the period since then the occupational distributions of the two groups have grown steadily more similar with an index of 32.5 in 1968. That is, about 21 per cent of the 1950 gap had been eliminated by 1968.

Another way of looking at this trend is to compare the proportion of nonwhite workers in high status job categories to the proportion of whites in these categories. Such an approach is used to examine the changes between 1962 and 1967 in a recent report by the Labor Department (U. S. Department of Labor, 1969: 23-24). The data used in the Labor Department study are broken down into more detailed occupational categories than are shown in Table 5.6 and this enables us to identify more precisely where changes have occurred. The percentage of the gap* that has been closed during this period ranges from a high of 48 per cent for elementary and secondary teachers to a low of one per cent for "other sales workers."

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*The gap is the difference between the percentage of the workers in a given occupational category in 1962 that were nonwhite and 10.8, the percentage of nonwhites in the labor force.

TABLE 5.6

OCCUPATIONAL DISTRIBUTIONS FOR WHITES AND NONWHITES, 1950-1968
(In Percentages)

Major Occupation Group	White						Nonwhite					
	1950	1955	1960	1965	1967	1968	1950	1955	1960	1965	1967	1968
Total employed (thousands)	54,286	56,693	59,640	64,432	66,361		5,672	6,496	7,041	7,747	8,011	
Per cent	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0	100.0	
White collar workers												
Professional and technical workers	8.0	9.8	12.0	13.0	14.0	14.3	3.0	3.5	4.7	6.8	7.4	7.8
Managers, officials, and proprietors	11.6	11.1	11.6	11.1	11.0	11.1	2.5	2.3	2.5	2.6	2.6	2.8
Clerical workers	13.8	14.2	15.6	16.3	17.2	17.5	3.5	4.9	7.2	8.2	11.2	11.8
Sales workers	6.9	6.9	7.2	7.1	6.6	6.6	1.2	1.3	1.6	1.9	1.7	1.9
Blue collar workers												
Craftsmen and foremen	13.7	14.1	13.7	13.5	13.9	13.8	4.8	5.2	5.9	6.7	7.7	8.0
Operatives	20.6	20.2	17.7	18.2	18.1	17.7	18.6	20.9	20.1	21.3	23.5	23.7
Nonfarm laborers	5.0	4.7	4.5	4.5	4.0	4.0	14.1	15.8	13.8	12.7	11.2	10.7
Service workers												
Private household workers	1.6	1.8	2.0	2.0	1.4	1.4	17.7	14.8	14.3	12.7	10.4	9.5
Other service workers	6.9	7.2	8.2	8,7	9.1	9.0	16.1	16.8	17.5	19.0	19.0	18.8
Farm workers												
Farmers and farm managers	7.3	6.0	4.3	3.3	2.8	2.7	7.5	4.0	3.1	1.3	1.3	1.2
Farm laborers and foremen	4.4	3.9	3.3	2.4	1.9	1.8	10.9	9.5	9.3	6.3	4.0	3.7
Index of Dissimilarity							41.0	39.9	42.6	36.3	33.6	32.5

Source: U. S. Bureau of the Census, 1968a: 226 and 1969h: 223.

The most noticeable fact is the small amount of change in salaried managers, officials and proprietors, and for sales workers; only about 5 per cent of the 1962 gap was eliminated by 1967. On the other hand, the most change has occurred in professional and clerical occupations, where the gap has been reduced by 23 and 39 per cent respectively.

(3) Education.--Educational gains have, in most respects, paralleled gains in income and occupational status. Table 5.7 shows the median years

TABLE 5.7

TRENDS IN MEDIAN YEARS OF SCHOOLING FOR WHITES AND NONWHITES: 1940-1968

25 Years Old and Over	Median Years of Schooling		
	White	Nonwhite	Ratio
1940	8.7	5.7	65.5
1950	9.7	6.9	71.1
1960	10.8	8.2	75.9
1964	12.0	8.9	74.2
1965	12.0	9.0	75.0
1966	12.1	9.2	76.0
1967	12.1	9.4	77.7
1968	12.1	9.5	78.5

Source: U. S. Office of Education, 1969b: Table 9, 9.

of schooling for whites and nonwhites from 1940-1968. From 1950 to 1968 about 26 per cent of the initial 1950 gap was eliminated. This is only slightly higher than the gains in income and occupation. (Seventeen per cent of the "income gap" and 21% of the "occupational gap" had been eliminated in approximately the same time period.)

Of more significance, really, than educational differences between the total white and nonwhite or Negro populations is whether those age groups who have recently completed their education received similar levels of training. Such figures help to indicate (1) the extent to which discrimination has been eliminated in the educational system as such, and (2) the extent to which the educational level of the total white and Negro populations will eventually reach parity as the older, less equal cohorts are replaced by younger groups. As a basis for this estimate the median years of schooling for those in the 25-29 age cohort are presented in Table 5.8. Here the picture is much more optimistic. In 1969 the median number of years of schooling for Negroes was 96 per cent as high as that of whites (71.3% for nonwhites). This means that approximately 90 per cent of the gap that existed in 1950 had been removed by 1969.

It must be kept in mind that the above figures deal with median levels of education. These data are relevant to our considerations because the indication is that, in the educational system as a whole, efforts to reduce the differences between whites and Negroes have been in large measure successful. Consequently we can reasonably expect them to be effective in the realm of higher education per se.* This does not, of course, indicate the extent to which such equality has in fact been obtained at the level of higher education. We now turn to that question.

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*This is in contrast to efforts to reduce differences in the educational attainment for those from different SES backgrounds. As we saw in Section I the "gap" has been reduced to only a modest extent.

TABLE 5.8

MEDIAN YEARS OF SCHOOLING FOR THOSE AGED 25-29 BY COLOR (1940-1968) AND RACE (1964-1969), AND THE RATIO* BETWEEN NONWHITES AND WHITES AND NEGROES AND WHITES

	White	Nonwhite	Negro	Ratio	
				Nonwhite-White	Negro-White
1940	10.7	7.1	NA	66.4	-
1950	12.2	8.7	NA	71.3	-
1960	12.3	10.8	NA	87.8	-
1964	12.5	11.8	11.5	94.5	92.0
1965	12.4	12.1	12.0	97.6	96.8
1966	12.4	12.0	11.8	96.0	94.4
1967	12.6	12.1	12.1	96.0	96.0
1968	12.6	12.2	12.1	96.8	96.0
1969	12.6	NA	12.1	-	96.0

*That is, the percentage that nonwhite and Negro medians are of the white median for the same year.

Source: U. S. Office of Education, 1969b: Table 9, 9; U. S. Bureau of the Census, 1966 and 1969f.

Table 5.9 indicates the percentage of whites and nonwhites aged 25 and over who had received four or more years of college for selected years for 1940 to 1968. These data show that over the total time period there has been a clear trend of nonwhites catching up with whites, both absolutely and relatively. Some 30 per cent of the gap that existed in 1950 had been eliminated by 1968, even though nonwhites were still only about half as likely as whites to obtain four or more years of college.

TABLE 5.9

PERCENTAGES OF WHITES AND NONWHITES 25 YEARS OLD AND OVER WITH FOUR OR MORE YEARS OF COLLEGE AND RATIO OF NONWHITE TO WHITE PERCENTAGES--SELECTED YEARS 1940-1968

	White	Nonwhite	Ratio	
1940	4.9	1.3	26.5	
1950	6.4	2.2	34.4	
1960	8.1	3.5	43.2	
1964	9.6	4.7	49.0	
1965	9.9	5.5	55.6	50.6*
1966	10.4	4.7	45.2	
1967	10.6	5.0	47.2	
1968	11.1	5.6	54.5	

*Average for 1965-1968

Source: U. S. Office of Education, 1969b: Table 9, 9 and U. S. Bureau of the Census, 1969f.

Now let us look at similar figures for the 25-29 age cohort (Table 5.10). Our expectation was that, like the figures for median years of schooling, the gap would have been reduced more drastically for the younger cohort. This does not seem to be the case, however. For the years 1950 and 1960 there is little difference between the figures for the total population and for the 25-29 cohort. Of the more interest is that since 1965, nonwhites and Negroes seem to be falling farther behind whites at a rapid rate. More specifically, the percentage of nonwhites or Negroes who receive a college degree seems to be holding constant or declining while the percentage of whites attaining this level is increasing significantly.

TABLE 5.10

PERCENTAGES OF WHITES, NONWHITES AND NEGROES AGED 25-29 WITH FOUR OR MORE YEARS OF COLLEGE AND RATIO OF NONWHITE TO WHITE, AND NEGRO TO WHITE PERCENTAGE--SELECTED YEARS 1940-1968

	White	Nonwhite	Negro	Ratio		
				Nonwhite-White		Negro-White
1940	6.4	1.6	NA	25.0		-
1950	8.1	2.8	NA	34.6		-
1960	11.8	5.4	NA	45.8		-
1964	13.6	7.0	5.6	51.5		41.2
1965	12.9	8.3	6.8	59.7	52.8*	52.7
1966	14.7	8.3	6.0	56.5		40.8
1967	15.5	8.3	5.4	53.6		34.8
1968	19.1	7.9	5.4	41.4		28.3

*Average for 1965-1968.

Source: U. S. Office of Education, 1969b: Table 9, 9 and U. S. Bureau of the Census, 1969f.

An important word of caution needs to be added here. The figures for 1964-1968 are based on the Current Population Survey which relies on a national random sample. When we focus on those with four or more years of college, the number of cases involved becomes relatively small and is therefore subject to significant sampling error. However, such data are available for five different years. With the exception of 1965, which shows a sharp increase in the nonwhite and Negro attainment rates and a decrease in the white rate, there is a definite tendency for the blacks to fall behind. While we are not confident that the figures give an accurate estimate of the extent of this trend, there certainly seems to be no evidence that the trend was in the other direction. That is, the educational gap was certainly not reduced for these younger cohorts.

The immediately preceding figures deal with those who have four or more years of college. The finding that the "college gap" between whites and blacks has not been decreasing in recent years--and has probably been increasing--raises at least two related questions. Why has this been happening, and is the same thing happening with respect to those who enter college but do not stay a full four years? Let us focus on the last question first. Table 5.1 suggests a partial answer. This table deals with the cumulative percentages of the 25-29 age cohort by sex and race that have attained at least a given level of education.* That is, in 1964 71.9 per cent of the men aged 25-29 had obtained at least a high school education, 31.9 per cent had completed one year of college or more, etc.

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*The same warnings made earlier about sampling error apply to this table.

TABLE 5.11

ACCUMULATIVE EDUCATIONAL ATTAINMENT FOR MALE AND FEMALE HIGH SCHOOL GRADUATES 25-29 YEARS OLD AND TRANSITION RATES FROM ONE LEVEL OF EDUCATION TO ANOTHER, BY RACE: 1964-1968

Minimum Level of Attained Education	(1) At Least a High School Graduate		(2) At Least 1-3 Years of College		(3) At Least 4 Years of College		(4) 5 or More Years of College
Transition Rates		(2)÷(1)		(3)÷(2)		(4)÷(3)	
				Male			
White							
1964	71.9	44.3	31.9	54.8	17.5	42.3	7.4
1965	72.8	42.2	30.7	53.4	16.4	40.2	6.6
1966	73.3	43.4	31.8	56.3	17.9	40.2	7.2
1967	74.3	43.0	34.1	53.7	18.3	42.6	7.8
1968	75.5	45.4	34.3	55.7	19.1	41.4	7.9
Negro							
1964	41.6	28.1	11.7	64.1	7.5	17.3	1.3
1965	50.1	32.5	16.3	44.8	7.3	17.8	1.3
1966	49.0	27.1	13.3	40.6	5.4	20.3	1.1
1967	51.6	25.0	12.9	32.6	4.2	14.3	0.9
1968	58.1	25.0	14.5	37.2	5.4	20.4	1.1
Ratio of Negroes to Whites							
1964	57.9	63.4	36.7	116.9	42.9	41.0	17.6
1965	68.8	77.2	53.1	83.8	44.5	44.2	19.7
1966	66.8	61.4	41.9	72.1	30.2	50.6	15.3
1967	69.4	54.5	37.8	60.8	23.0	50.0	11.5
1968	77.0	54.9	42.3	66.9	28.3	49.1	13.9

Source: U. S. Bureau of the Census, 1965, 1966, 1968c, 1969f.

TABLE 5.11--Continued

Minimum Level of Attained Education	(1) At Least a High School Graduate		(2) At Least 1-3 Years of College		(3) At Least 4 Years of College		(4) 5 or More Years of College
Transition Rates		(2)÷(1)		(3)÷(2)		(4)÷(3)	
			Female				
White							
1964	72.5	29.7	21.5	45.7	10.0	21.0	2.1
1965	72.7	30.1	21.9	44.7	9.8	19.4	1.9
1966	74.4	32.4	24.1	49.0	11.8	20.3	2.4
1967	75.3	35.6	26.8	47.4	12.7	20.5	2.6
1968	79.9	38.7	30.9	39.5	12.2	21.3	2.6
Negro							
1964	47.8	27.0	12.9	29.5	3.8	23.7	0.9
1965	50.3	29.0	14.6	45.9	6.7	22.4	1.5
1966	47.0	23.0	10.8	59.3	6.4	18.8	1.2
1967	55.0	29.1	16.0	39.4	6.3	15.9	1.0
1968	53.7	26.3	14.1	38.3	5.4	7.4	0.4
Ratio of Negroes to Whites							
1964	65.9	91.0	60.0	63.3	38.0	112.9	42.9
1965	69.2	96.4	66.7	102.5	68.4	115.4	78.9
1966	63.2	70.9	44.8	121.0	54.2	92.2	50.0
1967	73.0	81.8	59.7	83.1	49.6	77.6	38.5
1968	67.2	67.9	45.6	97.1	44.3	34.7	15.4

First let us consider the numbers of blacks and whites that graduate from high school so that we have an idea of the size of the potential college populations. The table shows that Negroes have clearly lowered the gap with respect to the numbers graduating from high school, though their attainment rates are still only 65-80 per cent of the white rates. The differences for men and women are also of interest. Until relatively recent years Negro women had tended to graduate in significantly greater numbers than men. Since 1964 this has apparently been reversed, with Negro men gaining on whites at a much faster rate than Negro women. No such reversal has occurred for whites; women continue to graduate from high school in slightly higher proportions than men.

With respect to the transition to college the differences between Negro men and Negro women are even more significant. Negro men have clearly gained on whites, moving from a ratio of 36.7 in 1964 to 42.3 in 1968, though they still remain far behind. Negro women on the other hand are apparently dropping farther behind, going from a ratio of 60.0 to one of 45.6. Therefore the answer to the question posed above of how many blacks relative to whites are entering college is that for the 25-29 cohort black men are enrolling in college in larger absolute numbers, that they are gaining relatively on whites, but that they still are far behind. On the other hand, while the absolute number of Negro women has increased they are falling proportionately farther behind white women and have lost the advantage they once had over black men.

The above observations answer in part the other question posed of why the ratio of Negro to white college graduates seems to be declining: the proportion of Negro women entering college is falling farther behind whites. There is a second part to the answer, and it has to do with the percentage of entering college students that graduate. This is shown by the alternate columns of figures, which are the transition rates. That is, they indicate the percentage of the high school graduates who attended colleges for at least a year, the percentage of those with one year of college who graduated, etc.* For whites the picture is clear. The transition rates have remained quite stable during the period for which data are available even though the percentage of the age cohort reaching any given level has increased during the same time period. For Negroes, however, the transition rates have decreased; i.e., the dropout or attrition rate has increased. This is especially true for those who finished at least one year of college but did not finish four years. The magnitude of the decrease is difficult to determine because of probable sampling error, but this trend has been reasonably clear during the years that these cohorts were in college.

Unfortunately, on the basis of the data concerning the 25-29 age cohort we cannot possibly know what is happening within the higher education system currently. Even the data for 1969 refer in large part to people who graduated from college four to eight years ago. In the last few years there seem to have been increased efforts to get black students into and through college. Consequently, what we need to know is the degree to which these recent attempts have been successful.

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*These transition figures understate the number who enroll in college and the rate of college dropouts since the category is those who completed one to three years of college. Since many individuals enroll but do not complete one year, the transition figures shown distort the actual picture to some extent. If this affects the comparison between blacks and whites at all it seems likely that the dropout rate for Negroes is understated, since supposedly more of them would have poor high school preparation and drop out during the first year. This may be offset, however, by the fact that many attend Negro colleges with lower academic standards.

To some extent the data to answer such a question are inherently unavailable. College education is a fairly long process. Moreover, in the United States the channeling and scheduling mechanisms are rather loose. Some people do not enroll until several years after high school; others attend college awhile, drop out and later return; still others go part-time and extend their college career over a considerably longer time period than the "usual" four years. Consequently, data concerning school enrollments and the educational attainment of younger age groups may not give a very accurate picture of what the final educational outcome is likely to be for these age cohorts. Nonetheless, if these limitations are kept in mind it seems worthwhile to see what these data suggest about recent trends.

First we will consider the data on educational attainment of younger age groups, and then we will look at data on college enrollments.*

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*Both types of data are based on Current Population Surveys conducted by the Bureau of the Census and are subject to the problems of sampling error mentioned previously. The educational attainment data is collected each year in March and is based primarily on two questions: (1) "What is the highest grade he has ever attended?" and (2) "Did he finish this grade?" That is, it focuses on the highest year of schooling completed. Enrollment data are collected annually in October and "are based on replies to the enumerator's inquiry as to whether the person had been enrolled at any time during the current term or school year in any type of graded . . . regular school system," in this case colleges or universities which grant academic degrees, whether full-time or part-time.

Table 5.12 compares the percentages of white and Negro 18 and 19 year olds who have completed one or more years* of college. We see from this table that Negroes seem to have been gaining on whites in recent years, though the 1967 data contradict the trend. Despite what appear to be recent improvements--about 18 per cent of the 1965 gap has been eliminated--Negroes are still far behind whites. If trends continued as they have in the past it would be approximately another 20 years before Negroes would finish one year of college at rates approximating those of whites. When we look at college graduation rates for younger cohorts (ages 20-24--the first age group which would have any appreciable numbers of college graduates), we find that recent changes are highly erratic. The Negro to white ratio goes from 44 in 1965 to 18 in 1966 to 21 in 1967 to 51 in 1968. Such wild fluctuations are probably due to error factors, and consequently nothing meaningful can be said about trends in recent graduation rates for whites and Negroes.

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*Most of the individuals in this category will have completed only one year. For example, of the 12.8 per cent of the whites who had completed one or more years in 1968, 11.5 per cent had completed only one year.

TABLE 5.12

PERCENT OF WHITES AND NEGROES AGE 18-19 ATTAINING ONE OR MORE YEARS OF COLLEGE: 1965-1968

	1965	1966	1967	1968
Whites	11.8	13.0	14.0	12.8
Negroes	5.4	6.1	6.0	7.1
Ratio	45.8	46.9	42.9	55.5

Source: U. S. Bureau of the Census, 1966, 1968c, 1969f.

When we consider school enrollment figures (rather than attainment levels), a similar picture emerges. From 1965 to 1968 the absolute number of Negroes enrolling in colleges increased 77 per cent for the 16-24 age cohort to a total of 434,000 (Table 5.13).

TABLE 5.13

NUMBER OF NEGROES ENROLLED IN COLLEGE AND NEGROES AS A PERCENTAGE OF THE TOTAL ENROLLMENT, BY AGE: 1965-1968

Age	Number Enrolled (thousands)					As A Percentage of Total Enrollment			
	1965	1966	1967	1968	Per cent Increase 1965-68	1965	1966	1967	1968
16-17	30	17	16	20	-33⅓	11.4	6.3	6.7	7.1
18-19	111	112	141	182	64	5.0	4.6	6.2	7.3
20-21	99	112	105	112	71	4.4	4.6	5.8	6.1
22-24			51	58				5.1	5.6
25-29	34	41	42	33	82	3.7	4.4	5.9	4.2
30-34			15	29				4.2	7.8
To	274	282	370	434	58	4.3	4.6	5.8	6.4

Source: U. S. Bureau of the Census, 1967d: Tables 4 and 5, 1969b: Tables 1 and 14.

The relative proportion of Negroes within the total college student population that they constitute also increased, moving from 4.3 per cent in 1965 to 6.4 per cent in 1968 for those of ages 16-34.

These figures are difficult to interpret, however. It is not clear whether the increase in the proportion of Negroes in the college population is due to greater percentages of the Negro population enrolling or to a growing proportion of Negroes in the total population. The information needed to clarify this question fully is not available, but data for 1967 and 1968 suggest that at least a portion of such increases in Negro college enrollments is due to a higher proportion of Negroes in the younger college age cohorts (Table 5.14).

TABLE 5.14

NEGROES AS PER CENT OF POPULATION, BY AGE: 1967 AND 1968

Age	1967			1968		
	Total Population	Negro Population	Per cent Negro	Total Population	Negro Population	Per cent Negro
16-17	7,051	879	12.5	7,265	904	12.4
18-19	6,358	780	12.3	6,587	830	12.6
20-21	5,818	649	11.2	6,063	697	11.5
22-24	7,833	854	10.9	7,912	894	11.3
25-29	11,761	1,246	10.6	12,390	1,299	11.3
30-34	10,584	1,131	10.7	10,726	1,127	10.3

Source: U. S. Bureau of the Census, 1969b: Tables 1 and 14.

On the other hand, some of the increase seems to be due to increases in the proportion of Negroes enrolling in college. Data showing the percentages of Negroes and whites in the 18-24 age groups who enrolled in college are available for 1964, 1967 and 1968 and are presented in Table 5.15. These data also indicate that Negroes have been gaining on whites. Moreover, the remaining gap shown for 1968 is very close to the gap indicated by the data on educational attainment. That is, Negroes are enrolling in college (or completing one year of college)at a rate that is approximately 50 and 55 per cent of the white rate.

TABLE 5.15

RATE OF NEGRO AND WHITE COLLEGE ENROLLMENTS--PERCENTAGES OF THE 18-24 AGE COHORT ENROLLED IN COLLEGE, BY RACE AND DIFFERENCE AND RATIO OF NEGROES TO WHITES: 1964, 1967, 1968

	1964	1967	1968
White	22.0	27.8	27.5
Negro	8.1	13.4	14.5
Ratio	36.8	48.2	52.8*

*Twenty-five per cent of the 1964 gap has been eliminated.

Source: U. S. Bureau of the Census, 1969b: Tables F, 1, and 14.

In our attempt to determine recent trends we have looked at attainment data for the younger age cohorts and at enrollment data. We have seen that Negroes seem to be gaining on whites in the very recent past, but that they still remain far behind. However, most of the data either focus on the first year of college or make no specification about how far along the students were in their college program.* It obviously makes a difference whether Negroes and whites are equal only with respect to the number who enroll in college or whether they also progress through the system at similar rates. Therefore, data concerning recent rates of attrition and the distribution of students by year in college can help to suggest whether recent increases in the proportion of Negroes enrolling in college will result in increases in the proportion receiving college degrees--and how this compares to whites. Table 5.16 shows the percentage of college students, by race, at various levels in the higher education system.

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*College graduation rates of younger cohorts varied so erratically that the data seemed to be unreliable to the point that no conclusions could be reached.

TABLE 5.16

COLLEGE ENROLLEES AGES 16-34 AT VARIOUS LEVELS
OF HIGHER EDUCATION, BY RACE
(In Percentages)

Level	1967		1968	
	White	Negro	White	Negro
1-2 years	52.5	61.2	51.0	64.6
3-4 years	32.4	30.4	34.4	27.4
5 years or above	15.1	8.4	14.0	7.8
Total %	100.0	100.0	100.0	100.0
N*	(5,906)	(369)	(6,255)	(434)

*Thousands.

Source: U. S. Bureau of the Census, 1969b: Tables 1 and 14.

We see that for both groups the bulk of students are in their first or second year. However, Negroes are even more concentrated in this category, and this concentration seems to have increased between 1967 and 1968.*

This can result from two things. First, Negroes may drop out of college at significantly higher rates than whites. On the other hand, because the proportion of Negro high school graduates going on to college has increased in recent years at a faster rate than whites, a "temporary" concentration at the lower levels may have resulted. Both of these factors probably play a role, but the data available make it impossible to measure their relative influence. It is possible, however, to establish that at least some of the difference is due to the first factor: higher drop out rates for recent cohorts of Negroes. Table 5.17 shows the percentage enrolled of those 14-24 years old who had attained various levels of education, by race for 1967 and 1968. (Some examples may help to explain how the table is to be read: 20.2 per cent of the whites ages 14-24 who had completed four years of high school by October 1967 were still enrolled in school--presumably in college--at that time. Of those whites who had completed one year of college by this date 61.4 were still enrolled, etc.) What the table shows is that in 10 out of the possible 12 comparisons between whites and Negroes over the two year period, Negroes have a lower persistence or transition rate than whites. (One of the exceptions--Negroes with five or more years in 1967--involves so few cases that the reversal is probably due to sampling error.) This is hardly surprising. Rather, what is surprising is how close together the whites and the blacks are.

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*As noted above several times, relatively little confidence can be put in small changes over short time periods.

Moreover, the changes between 1967 and 1968 seem to indicate that they are moving closer.

TABLE 5.17

EDUCATIONAL PERSISTANCE RATES, I.E., PER CENT CURRENTLY ENROLLED, OF NEGROES AND WHITES BY LEVEL OF EDUCATION ALREADY ATTAINED: 1967 AND 1968

Years of School Already Attained	1967		1968	
	White	Negro	White	Negro
High school				
4	20.2	15.5	20.4	16.2
College				
1	61.4	50.1	59.9	54.4
2	63.1	57.5	59.2	62.5
3	76.9	72.0	81.6	76.9
4	29.8	29.0	28.4	20.0
5+	58.6	100.0	61.4	50.0

Source: U. S. Bureau of the Census, 1969b: Tables 8 and 21.

Therefore, the trends observed for the early and middle 1968's,* namely increasing enrollments but higher drop out rates for Negroes, may have been reversed to some extent in recent years. However, any conclusions about recent trends must be very tentative because the enrollment and attainment data on which such conclusions are based can only be suggestive.

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*That is, the trends observed from the data on the 25-29 age cohort. See Tables 5.10, 5.11, and related discussion.

e. Summary and conclusion.--The question this chapter attempts to answer is whether the gap is closing between black and white levels of income, occupation, and education--with special reference to higher education. In the realm of education Negroes have been able to make significant strides in achieving equality, especially those in the younger age cohorts. Such gains, however, are just now beginning to occur at the level of higher education. Similar but more modest gains seem to be occurring with respect to occupations and incomes. In sum, there has been considerable success in the past in reducing racial inequalities with respect to education--compared to the lack of success in reducing class inequality. Consequently we conclude that it is probable that student aid programs will help to reduce such inequities further. Now we turn to a consideration of the interrelationships between education, occupation, and income and their consequences for racial equality.

6. Interrelationships: To What Extent Will More Education Improve Jobs and Income?

The next question is whether Negroes are able to translate gains they make in education into gains in occupational status and income. More specifically: (1) to what degree does a Negro receive a lower status job than a white man with the same educational qualifications; and (2) to what degree does a Negro get paid less when he has the same educational qualifications and job as a white man.

a. The efficacy of education: conventional wisdom and research findings.--A great deal of emphasis has been placed in recent years upon the importance of minority group members raising their level of education. Television commericals and bus and subway posters frequently emphasize the importance of "staying in school" and "getting a good education." The conventional wisdom advises the minority group members who wants to advance himself to "learn, baby, learn."

But an increasing amount of sociological research raises questions about the effectiveness of such a strategy for "getting ahead." Moreover, if raising a black man's level of education does not help him to raise his occupational status and income, equalizing educational attainment will not effectively reduce racial inequality with respect to occupation and income.

Such questions are definitely raised by an analysis of census data carried out by Siegel (1965). He analyzed the relationship between color, education, occupation, income, and region using 1950 and 1960 census data. With respect to the relationship between color, education and occupation, he found that occupation segregation seemed to have decreased slightly between 1950 and 1960 for both intra- and inter-cohort comparisons. However, this was not true for the subpopulation we are most interested in, the younger age cohorts with four or more years of college. For these groups there was about a one per cent increase in the index of dissimilarity between 1950 and 1960. Of primary interest to our concerns was his finding that as the level of education increased the amount of occupational segregation also increased. That is, there was less difference in the occupational distribution of whites and nonwhites with low levels of education than those with high levels except--and here is the important point for us--for those with four or more years of college. The significance of this finding will be elaborated later.

When Siegel compared white and nonwhite incomes, controlling for education, occupation and region, he found that about three-fifths of the income gap was due to differences in education, occupation and region, while two-fifths was apparently due to less pay because of nonwhite status. Here too, however, the gap was greater among those with higher levels of education.

Duncan (1969) has recently attempted to estimate the relative weight of factors contributing to the inferior social status generally held by Negroes. He does this by an explicit causal model derived from path analysis. The results of his analysis are summarized in Table 6.1 which can probably be explained most easily by an example.

TABLE 6.1

THE DIFFERENCES BETWEEN WHITES AND NEGROES FOR SEVERAL BACKGROUND AND ACHIEVEMENT CHARACTERISTICS AND THE SOURCE OF THESE DIFFERENCES--NATIVE MEN 25-64, WITH NONFARM BACKGROUND, AND THE EXPERIENCED CIVILIAN LABOR FORCE

	"Dependent Variables"			
	Number of Siblings	Education Years of Schooling	Status Score* of 1962 Occupation	1961 Income (dollars)
Mean for Whites	3.85	11.7	43.5	7,070
Mean for Negroes	4.86	9.4	19.7	3,280
Total Difference	1.01	2.3	23.8	3,790
"Independent Variables," i.e., the amount of total difference due to:				
Occupation	--	--	--	830
Education	--	--	4.8	520
Number of siblings	--	0.1	0.6	70
Family Background+	.54	1.0	6.6	940
Residual Difference	.47	1.2	11.8	1,430

*On a scale ranging from 0-96.

+Based on father's education and occupation.

Source: Duncan, 1969: 98.

The far right hand column shows that the mean income is $7,070 for whites and $3,280 for Negroes with a difference or gap of $3,790. What the other figures in the column show is how much of this $3,790 difference is due to each of the "independent variables" indicated. That is, $830 of the difference can be "explained" by differences in the occupations of Negroes and whites, $520 by differences in educational level, $70 by the tendency of Negroes to grow up with more siblings, and $940 by the fact that Negroes tend to have parents with lower levels of education and occupation. Yet when all of these factors have been controlled there still remains a gap or residual difference of $1,430. The obvious--and probably correct--interpretation of this residual is that for the most part it is due to discrimination because of race per se. The sources of the white-Negro differences in the other "dependent variables" are shown in a similar manner.*

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*Occupation is assumed to be affected by education, number of siblings, and family background; education by number of siblings and family background; and number of siblings by family background.

There are of course several reasons why Duncan's estimate of the effects of the education (and the other factors measured) might not be completely accurate. First, there could be error factors in the data itself. Second, the introduction of additional variables, e.g., region, would probably produce a somewhat different set of estimates. Third, the model on which the estimates are based involves sets of assumptions which necessarily simplify reality and may subsequently affect the estimates. But even if the "true" effect of education varies from Duncan's estimate by 100 per cent, e.g., it accounted for $1,040 of the $3,790 difference instead of $520, the effect of education would still account for only about a third of the total gap in occupation and income. On the other hand, the residual differences account for 11.8 (50%) of the 23.8 point difference in occupation and $1,430 (39%) of the $3,790 difference in income. Now if the residuals are due to "pure" racial discrimination* then it means that elimination of discrimination in hiring and promotion practices and of lower pay to blacks for the same work would have a much larger impact on job and income equality than equalizing educational attainment. The same conclusion is suggested by Siegel's (1965) finding that two-fifths of the black-white income differential was apparently due to "pure" racial discrimination.

These findings could be used to conclude that the attempt to reduce racial inequality through expansion of educational opportunities for Negroes is a relatively poor investment which is likely to yield only small improvements. In general, such a conclusion is probably warranted. As in the case of class inequality, and despite the prevalent "learn, baby, learn" ideology, expanded educational opportunity is probably not the factor that should be given top priority in the effort toward greater equality.

While greater skepticism is required about the efficacy of "education in general" producing racial equality, nonetheless there is reason to believe that higher education can play a significant role in reducing racial inequality. In this sense, the "general" policy conclusions suggested by the findings of Siegal and Duncan are not entirely applicable for the specific problem upon which we are focused, i.e., the effects of higher education. We will now review data which show why the general conclusion needs to be qualified.

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*That is, when blacks are treated differently even when they have the same social characteristics as whites. For example, when a Negro is paid less than a white man, even though they both come from the same socioeconomic background, have the same level of education, are performing identical work, etc.

Before this is done, however, it should be made clear that the concern has not been to set up "straw men" and then demolish them. Rather, the works of Duncan and Siegel have been discussed because they are two of the more sophisticated analyses of the relationship between education and racial equality, and because they clearly raise questions about the wisdom of placing too much confidence in the power of education. Consequently, the approach has been to outline this general conclusion and then show how it needs to be qualified when applied to higher education. An analogy is the process of finding a strong first order relationship, and then discovering that it does not hold for a particular conditional relationship.

b. Why more higher education may be of significant help.--The thesis of this section is that more higher education for Negroes will help significantly to reduce racial inequality because (1) the relationship between race, education, occupation and income has changed considerably in recent years,* and (2) the relationship between these variables is, in most respects, especially favorable at the highest levels of education, i.e., for those who receive a college degree. Our first task will be to examine trends in the relationship between education and occupation. More specifically we will attempt to determine whether in recent years there has been any change in the relative effect of education compared to job discrimination on the occupational status of Negroes. Later we will review these trends more briefly for the relationship between education and income.

(1) Lower levels of education vs. job discrimination: recent trends.--We saw earlier that the index of occupational dissimilarity has

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*More specifically, since 1960, the last year for which Siegel had data, and 1962, the year the data were collected for the Duncan study.

steadily decreased since 1960 (Table 5.6). The question we are asking now is how much of that decrease has been due to Negroes raising their level of education and how much is due to an actual decrease in discriminatory hiring and promoting practices. If the latter factor plays a significant role it means that additional investments in higher education will produce greater returns--in the form of equality--than has been the case in the past. That is, each increment of increase in education will bring a correspondingly larger increment in occupational status than it has in the past.

The nature of the data available does not permit regression techniques such as those used by Duncan. We can, however, make a rough estimate of the relative impact of these two factors. This can be done by taking the actual number of nonwhites at a given level of education and then distributing them among the occupational categories according to the percentages for the whites with that level of education. When this is done for all levels of education and the results are summed, we have the occupational distribution of nonwhites that would be expected if their treatment in the job market were the same as whites with comparable levels of education. When an index of dissimilarity is calculated between this expected distribution for the nonwhites and the actual distribution for the whites, the result is the amount of occupational dissimilarity that is due solely to differences in the educational level of the two groups. When compared to the original index of dissimilarity (actual white compared to actual nonwhite) the approximate amount of difference that was due to factors other than education is indicated. As in the case of the "residual differences" in Table 6.1 the most plausible interpretation is that the great majority is due to outright racial discrimination in hiring and promotion practices.

The results of these calculations for the years since 1960 for which reliable data are available are shown in Table 6.2.

TABLE 6.2

ACTUAL INDICES OF OCCUPATIONAL DISSIMILARITY BETWEEN WHITES AND NONWHITES COMPARED TO INDICES OBTAINED WHEN POPULATIONS ARE STANDARDIZED FOR EDUCATION: SELECTED YEARS SINCE 1960

	1960	1962	1965	1966	1967	1968
Actual	36.4	39.0	36.0	37.6	33.4	34.5
Standardized	12.3	11.4	10.9	12.6	12.8	11.1
Ratio	33.8	29.2	30.3	33.5	38.3	32.2

Source: U. S. Department of Labor, 1963, 1966, 1967, 1968, 1969b, (Table J.); and U. S. Bureau of the Census, 1963a: Table 8.

What we see is that while the percentage of occupational differences due to educational differences has fluctuated up and down since 1960, there is no clearly discernible trend. The effect of education did increase (and supposedly the effect of discrimination decreased) from 1962 through 1967, but it dropped off again in 1968. It should be kept in mind that, like the estimates by Siegel and Duncan, these figures are averages for all levels of education.

Consequently, the next question which needs to be considered is whether for Negroes the differential effect of lower education and discriminatory practices relative to each other varies for different levels of education. That is when differences in the occupational distribution of nonwhites and whites having a college education were compared to differences for those with, e.g., a high school education, is the amount of discrimination greater, less or the same? One way of estimating this is to calculate a separate dissimilarity index for each level of education. The results of these calculations are shown in Table 6.3

TABLE 6.3

INDEX OF DISSIMILARITY FOR MAJOR OCCUPATIONS FOR WHITES AND NONWHITES BY LEVEL OF EDUCATION FOR EMPLOYED MALES AGED 18 AND OVER: SELECTED YEARS SINCE 1960

Level of Education	1960	1962	1965	1966	1967	1968
College						
4 or more	14.7	16.3	29.3	20.7	17.7	14.0
1 to 3	27.3	29.1	43.0	33.9	24.2	22.7
High School						
4	31.9	35.4	34.1	34.8	28.1	34.0
1 to 3	32.2	34.6	30.5	31.5	30.2	28.5
Elementary						
8	31.0	32.9	31.4	28.4	26.2	27.8
Less than 8	27.4	31.0	28.9	26.7	22.4	24.1

Source: U. S. Department of Labor, 1963, 1966, 1967, 1968, 1969b, (Table J.); and U. S. Bureau of the Census, 1963a: Table 8.

The general pattern of change over time is very similar to the pattern found in Table 6.2, since these are two different ways of looking at the same data. Of more interest are the variations that occur between levels of education. Siegel found that the amount of discrimination* increased as the level of education rose until Negroes had a college degree at which point it decreased significantly. (This is not to say that Negroes with higher levels of education were worse off than those with less education, only that they were farther behind whites with comparable education.)

If this situation still existed it would mean that each increment of increase in education would bring an increasingly smaller increment in occupational status, at least up to the point of receiving a college degree. In this sense, investments in education would produce a decreasing rate of return at the higher levels. However, this pattern seems to have changed significantly. Since 1960, with the exception of 1965, the greatest amount of dissimilarity has occurred not at the level of "some college," i.e., one to three years, but for high school graduates or high school dropouts. Consequently, not only do Negroes who complete one or more years of college receive better jobs than those with less education, but they also come closer to having jobs similar to whites with the same levels of education. That is, they not only have more education, they get more _for_ their education. This is even more true for nonwhites who receive college degrees.

In addition to this survey and census data there is a significant amount of qualitative data that indicates that not only is discrimination against Negro college graduates continuing to decrease, but that there is great demand for such individuals in the job market. Most of the evidence is derived from interviews with college placement officers. For example, in a recent article in _Occupational Outlook Quarterly_, a publication of the Bureau of Labor Statistics, the following note appeared concerning opportunities in the Southeast:*

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*That is, the gap between whites and blacks with the same amount of education.

> For Negroes, 1969 is proving to be the most open year yet--more offers are coming from the South. This progress was attributed variously to Federal enforcement of the Equal Employment Opportunity Act, general shortage of graduates, and growing recognition that color does not determine ability.
>
> Although the pattern is breaking, black students tend to prepare for teaching careers or at least to have a minor in education as a hedge against possible discrimination in other fields. In contrast to last year, when virtually all job offers to Negro graduates were for out-of-region openings, schools in each of the States reported increasing inquiries from southern and local firms for Negro applicants in all job areas--not just teaching. The Negro graduate of 1969 who has reasonably good grades will have no trouble finding a job.*
>
> *[Quoted footnote]: This section was prepared by Charles Bullock, Region IV, Bureau of Labor Statistics, U.S. Department of Labor. Region IV includes Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee. Interviews were held with placement officers and others responsible for placement work on 43 campuses in Region IV. Enrollments ranged from 635 to 15,000. Two colleges enrolled only women students; 12 were predominantly Negro. Only two schools were not accredited--a Negro college with 700 enrollees and a church-operated school of 4,000 white students.

What is probably an even more optimistic estimate of the situation was made concerning the North Central Region in sections of a Labor Department mimeographed news release in June of 1969:

> Outlook for Negro graduates--Negro college graduates could look forward to extremely favorable employment opportunities in 1969. Without exception, placement officers said black graduates were readily hired for all kinds of positions. Some companies specifically requested Negro graduates and were willing to hire those with only marginal grades and to pay premium salaries. Suburban school systems were reported to desire black teachers in order to integrate their faculties. The major difficulty, directors of placement said, was the extremely small number of black graduates available. For example, a school of Nursing reported very few black girls enrolled, and a school of Journalism reported no

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*Because of the extremely impressionistic and qualitative nature of these data, the original sources are reproduced verbatim where their length makes this feasible in order to allow the reader to estimate better the reliability of these reports.

> Negro enrollees. An additional factor cutting down the number of Negroes actively seeking employment was the large number of scholarships available to black students wishing to do graduate study.
>
> The few black graduates who were being interviewed experienced an astonishing change in company hiring policies toward minorities which has occurred over the last few years. One school reported the only Negro graduate looking for a job had thirty-two interviews and twenty-six job offers. As a result of this happy situation counselors were encouraging black students to branch out from the traditional "safe" employment fields such as education and sociology into any major in which they are interested.

The following item from a syndicated newspaper column suggests that some departments of the federal government are making special efforts to hire and promote Negroes:

> Opening for Negroes. Secretary of Transportation John Volpe is making an exhaustive effort to recruit and advance Negroes in his department.
>
> He has ordered a survey of all Negroes in the top grades who haven't been promoted for two years to find out whether they are under-employed and to boost them up the government ladder.
>
> He has also put special emphasis on conducting talent hunts at colleges with a high Negro enrollment.
>
> In a directive to subordinates, Volpe has declared flatly: "Before filling any supergrade position or any professional level position with a non-minority group person, the selecting official in OST (Office, Secretary of Transportation) must report on the affirmative efforts made to consider minority candidates qualitifed for the particular position."
>
> Note: This has caused some whites to complain that it is discrimination in reverse. (Pearson and Anderson, 1969.)

A lengthy article appeared in the New York Times (Nordheimer; 1969) on Monday, June 15, 1969, "based on a spot check by the New York Times of Negro campus placement officers and black talent recruiters for major industries." The main tone of the article was the same as those already cited: the headlines of the article read, "Recruitment of Negro Graduates by Business Sets Record in Small Colleges in South." However, the article notes that some of the people they interviewed (1) expressed concern about "tokenism," (2) were skeptical about the Nixon administration's willingness to push and enforce fair hiring provisions, (3) noted that there had been little recruitment by Southern based businesses, (4) suggested that Negroes hired by large companies often "found ceilings placed upon their advancement." On the other hand, the Florida A & M Placement Director, "reported that until recently only 18 to 24 concerns regularly recruited on the Tallahassee campus. 'Now some 500 firms make contact here and they are looking for graduates who can fill jobs right across the board in business and industry.'" At Morehouse College "until recently the great majority of . . . graduates went into 'teaching and preaching,' the 'safe' black professions." Of the 131 in the spring class of 1969, 3 plan to enter the ministry, 6 plan to work in education, 15 will enter law school. "Sixty percent . . . will go on to graduate school or enter different professional fields."

In an interview with Mrs. Pearl Baily of the Howard University Placement Office the following figures were obtained. In 1968 there were 679 liberal arts graduates. The placement office had reports on 461. Of these, 223 planned to enter graduate programs, 71 "planned" to enter "business or industry" and the rest planned to enter teaching or be employed by the federal government. Fifty-nine had definitely been offered and had accepted jobs with business and industry. Only this latter figure is available for both 1968 and 1969 and it had risen from 59 to 98.

In summary, on the basis of the recent qualitative data just presented it would seem that the trend indicated by the quantitative data is likely to continue and probably accelerate--at least for the next several years. Therefore, increasing the number of Negroes who enter college, especially the number of Negroes who receive college degrees, should have a significant effect on raising the occupational status of blacks to a level closer to that of whites, if the current trend holds.

(2) A note on why college makes a "difference."--A comment is in order about the curvilinear relationships between discrimination and level of education (Table 6.3). Two possible interpretations come to mind and it is likely that both are partially true. The first interpretation is based on the observation that entering college--especially obtaining the college degree--is an important symbol of middle class respectability. If a Negro has obtained this and, especially from the point of view of whites, made a qualitative increment in his social status, the black man is not only made more acceptable to prejudiced whites, but they are given a rationale for treating that Negro as "an exception." Such Negroes can no longer be screened on the basis of social class criteria since they have the appropriate class credentials. Consequently, if discrimination continues, race instead of "merit" becomes the explicit reason. Rather than suffer the full impact of such an obvious conflict between ideology and actions, whites find it easier to accept such blacks at least on a somewhat more equal basis.

The second interpretation is related to the first and hinges on the distribution of blacks according to level of education. The modal categories are high school dropouts and graduates, depending on age, and these are the categories which suffer the greatest discrimination. As the number of Negroes at higher levels of education increases, the level of discrimination may tend to increase to cope with the competition such educational change poses for the white population. In light of the pressures toward greater equality it seems unlikely that any such tendency would fully offset gains based on other social processes, such as the "middle-class respectability" phenomenon suggested in the first interpretation.

(3) The relationship of education and income.--We have just finished examining some aspects of the relationship between level of schooling and occupational status for white and nonwhite men. We now need to take the analysis a step farther and examine the differences in income for whites and Negroes, controlling not only for education and sex, but also for occupation.* Unfortunately, there are no data available which permit such complex multivariate analysis. We are, however, able to examine the relationship between race and income, controlling for education. This will allow us to determine how Negro increases in education are likely to affect the gap between black and white income. We can not, however, determine how much of the remaining difference is due to poorer jobs for the same level of education or to lower pay for the same job. With these limitations in mind let us examine the ratio of white to nonwhite income by level of education for five of the years since 1961 (Table 6.4).

Approximately the same two patterns that were noted for the relationship between education and occupation are found here. First of all, nonwhites have made small but steady gains on whites at most levels of education. Secondly, there is a curvilinear pattern between level of education and the gap between white and nonwhite incomes. That is, the ratio of nonwhite to white income tends to decrease as education increases, with a very sharp drop for high school dropouts. It then begins to increase as the higher levels of education are reached, with the gap being narrowest for those with a college education. Another point of significance for our concerns is that while the gap is narrowest for those with degrees, the extent of this gap has remained quite constant over the last three years for which data are available.

TABLE 6.4

THE RATIO* OF NONWHITE TO WHITE MEDIAN INCOME FOR HEADS OF FAMILIES** BY LEVEL OF EDUCATION: SELECTED YEARS 1961-1967

Level of Education	1961	1963	1965	1966	1967
College:					
4 or more	NA	75.1	82.0	81.3	82.1
1 to 3	75.2	64.6	73.6	76.1	79.7
High School:					
4	71.3	66.2	81.9	71.6	74.3
1 to 3	58.6	59.2	57.6	60.8	63.8
Lower:					
8	68.0	68.3	69.5	72.1	74.1
Less than 8	62.7	73.7	70.8	74.8	74.4
Total	53.4	55.4	55.4	59.9	61.8

*Percentage that nonwhite medians are of comparable white medians.

**For 1961-66 the population includes all heads of families. For 1967 the population includes only those heads of families 25 years old or over.

Source: U. S. Bureau of the Census, 1963b, 1964, 1967a, 1967b (in all of the preceding see Table 7) and 1969a: Table 14.

In order to make these ratios a little more empirically and intuitively meaningful, the actual dollar figures are shown for 1967 in Table 6.5. There are also data on Negroes available for that year, which allow us to estimate how much the gap is understated by the use of figures for nonwhites. While the gap is larger, we see that at least for this year the pattern of relationship is very similar whether we compare whites and nonwhites or whites and Negroes.

TABLE 6.5

MEDIAN INCOMES OF WHITE, NONWHITE AND NEGRO HEADS OF FAMILIES 25 YEARS OLD AND OVER, AND RATIO OF NONWHITE TO WHITE AND NEGRO TO WHITE MEDIANS, BY LEVEL OF EDUCATION: 1967

Level of Education	Median Incomes				
	White	Nonwhite	Negro	Nonwhite to White	Negro to White
College					
4 years or more	$12,770	$10,485	$9,979	82.1	78.1
1 to 3	10,277	8,189	8,027	79.7	78.1
High School					
4 years	8,962	6,665	6,403	74.3	71.4
1 to 3	7,971	5,083	4,920	63.8	61.7
Lower					
8 years	6,608	4,897	4,876	74.1	73.8
Less than 8	4,932	3,670	3,565	74.4	72.3
Total	8,471	5,232	4,993	61.8	58.9

Source: U. S. Bureau of the Census, 1969a: Table 14.

Up to this point the picture seems fairly clear: job and pay discrimination has been decreasing in recent years with the least discrimination occurring at the highest levels of education. Unfortunately things are not this clear cut, for the picture becomes quite confusing when we look at the relationship between education, income, and race (or color) for all individuals rather than just heads of families. These data are shown in Table 6.6

TABLE 6.6

RATIO OF NONWHITE TO WHITE MEDIAN INCOMES FOR MALE INDIVIDUALS BY LEVEL OF EDUCATION: SELECTED YEARS SINCE 1961

Level of Education	1961	1963	1965	1966	1967*
College					
4 years or more	NA	NA	NA	NA	67.0
1 to 3	NA	NA	NA	NA	75.0
1 or more	66.4	59.6	66.5	65.7	69.0
High School					
4 years	65.6	68.2	69.1	73.4	72.0
1 to 3	59.3	59.2	67.2	69.1	69.0
Lower					
8 years	69.2	73.1	70.9	79.8	77.0
Less than 8	67.5	71.8	78.7	80.7	81.0
Total	51.7	52.0	55.4	57.4	58.0

*Nonwhite data are not available for 1967 and the ratios for that year are Negro to white ratios.

Source: U. S. Bureau of the Census, 1963b: Table 28, 1964: Table 21, 1967a: Table 21, 1967b: Table 21, and 1969i: Table 4.

Between 1961 and 1966 the gap between white and nonwhite men was reduced considerably at all levels of education except for those with college training. Here the gap remained constant or even increased slightly. Between 1966 and 1967 the trend seems to be about the same for all those with less than college training, taking into account that the ratio for 1967 is based on data for Negroes rather than nonwhites. While the higher education categories are not strictly comparable for 1967 and earlier years, there seems to have been a relatively dramatic increase in the ratio between black and white income from 1966 to 1967 for those with college training. Such a change over only one year could easily be due to sampling error, however.

Even more puzzling than the trend over time for those with one or more years of college is the pattern of variation between levels of education. As noted before, for heads of families the pattern was clearly curvilinear. That is, the differences in income were least for those with the lowest and highest levels of education and most for those with the middle levels of schooling. For individuals, however, the pattern of income differences is "bimodal"--at least in more recent years. Those with the lowest levels of education suffer the least discrimination. Then discrimination increases through the level of high school dropouts until we reach high school graduates where it drops significantly, only to increase for those with college training to about the same level that existed for high school dropouts.

The above comments for the most part simply describe the table rather than interpret it. Moreover, when we focus on the difference between heads of families and individuals with respect to the relationship between education, income and color, interpretation becomes even more difficult. There are several obvious differences in the nature of the two populations which might account, in part, for the different findings. For example, some of the family heads are women. This is especially true for Negroes. Secondly, the two populations probably differ considerably with respect to age distribution, with family heads tending to be noticeably more middle-aged than individuals in general. Yet even with these differences taken into account, no meaningful interpretation of the quite different patterns is suggested. At this point, while there does seem to be a decrease in "pay discrimination" over time, the data concerning how this discrimination varies by educational level are contradictory, and no clear conclusion can be drawn about the matter.

c. Summary of the argument.--The thesis is that expansion of federal aid to higher education is likely to help reduce racial inequality, although probably not class inequality. This conclusion is based primarily on two findings. First, Negroes have been successful in increasing their level of educational attainment at significantly higher rates than whites so that the average educational gap between younger blacks and whites has been reduced considerably while the gap between lower and upper class whites has been reduced very little. That is, attempts to reduce racial inequality by raising the level of Negro education are not entirely offset by comparable increases in white attainment, i.e., offset by what was labeled in the first chapters as "educational inflation." From this observation--based primarily on processes occurring at the high school level--it seems reasonable that similar results will occur at the college level as higher education becomes more accessible.

The second basis of the conclusion is that the primary barrier to equality of occupational status--discriminatory hiring and promotion practices--seems to be lessening significantly in recent years, especially for Negroes with college training. Whether this also holds for income is not clear, but it seems unlikely that employers will be able to maintain pay discrimination (less money for the identical work) where job discrimination is significantly reduced since the former by itself is highly visible. At any rate, Negroes who are able to obtain a college education during the next decade will probably be able to move much closer to occupational and income equality with whites than has been possible in the past or will be possible for Negroes with lower levels of education.

On the basis of these findings it is concluded that increases in the number of Negroes who attend and graduate from college will make a significant contribution to the general reduction of racial inequality. This conclusion is based on the assumption that job and pay discrimination will continue to decrease. Consequently, the argument is not that higher education is the single "key" to equality. Rather, the conclusion is that if other types of efforts such as fair employment programs are more or less maintained,* increasing the number of Negro college graduates will, relative to other alternatives, produce a high payoff in a short time with a minimum of political resistance. This is in contrast to programs at lower levels of schooling which obviously will require longer to produce a payoff in the stratification structure per se. Similarly attempts to require employers to hire and promote Negroes immediately on a quota based on their representation in the population are likely to encounter extreme political resistance.

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*Obviously increasing their impact would in turn increase the impact of expanded higher education.

In short, the conclusion is that the "larger societal processes" will permit the expansion of Negro higher education which will have a significant impact on reducing racial inequality in the society as a whole.

Before turning to the question of whether expanded student aid will be successful in increasing the proportion of Negroes who attend and graduate from college, we will attempt to outline the theoretical basis of resolving the paradox presented at the beginning of Chapter 5.

d. Resolving the paradox: class equality vs racial equality.--

In the preceding chapter and the earlier sections of this one, racial inequality has been discussed in terms of differences in education, occupation and income. These are the same indicators that were used to measure (and in a sense define) SES when we discussed class inequality. Therefore, to show that blacks rank low on these indicators is to show that a larger percentage of these individuals are from the lower socioeconomic strata. Since the argument is that financial aid to college students would have relatively little impact on social mobility or equality with respect to SES it may intuitively seem contradictory to argue that federal aid can have a significant effect on improving the SES of Negroes--even though the data presented support the argument.

But the contradiction is more apparent than real, for there is a basic difference in the social processes that are involved. Complete equality of opportunity for all social classes would require that all the individuals in each generation be provided the same life chances as all other individuals of that generation. Those who start on the bottom must have the same probabilities of eventually attaining high status as those who start at the top and those who start at the top must have the same chance of ending up on the bottom as those who were born into the lower class. For a society to even approximate these conditions it must maintain extremely high rates of mobility. To the extent that there is significant inequality, i.e., the social distance between the top and the bottom is great, many individuals will have to move long social distances each generation. To put it another way, the mobility* of one generation is not cumulative to the mobility of the next generation since by definition there is always someone on the bottom (at least unless perfect equality is attained).

Attaining complete racial equality is much less demanding with respect to the amount of social mobility required since the effects are cumulative from generation to generation. What is involved is a process of moving enough blacks up and enough whites down so that the two groups are equally distributed over the stratification structure. But this can be done by accumulating movements over relatively short social distances for several generations until the association between race and low SES is eliminated. This is not to say that it will be easy to reduce racial inequality, only that reducing class differences and their effects on the opportunities of each succeeding generation is much more difficult.

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*More accurately, circulation or net mobility. Intergenerational mobility can be broken down into two components: structural mobility and circulation mobility. Structural mobility refers to the intergenerational changes that occur because of changes in the structure of the stratification systems, e.g., occupational structure. If white collar workers constitute a much higher percentage of the total work force in the sons' generation than they did in their fathers' time, many sons will necessarily be upwardly mobile. Such intergenerational changes are referred to as structural mobility. Circulation mobility refers to intergenerational changes above and beyond the structural changes. Structural changes are not related to the question of equality of opportunity. The focus of this latter concept is not on how many sons' have higher status jobs than their fathers, but whether the sons from low origins have the same life chances as the sons from high origins. This latter question is dependent not on total mobility or structural mobility, but on the rates and patterns of circulation mobility.

Consequently, expansion of higher education is much more likely to be effective in producing the former than the latter.

7. The Effect of Student Aid on Black Educational Attainment

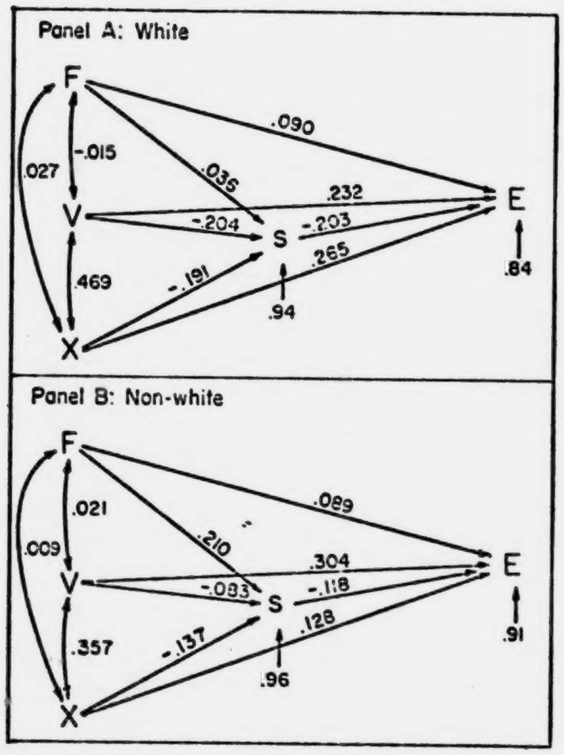
Up to this point we have focused on whether attempts to make both college entrance and graduation more accessible to Negroes would significantly improve their relative socioeconomic status, and thereby reduce racial inequality. Now we turn to the question of whether federal aid to higher education is likely to accomplish this. The essence of the argument here is that the effects of aid on college attendance are expected to be about the same for Negroes as for whites. However, this requires qualification. There is some evidence to indicate that money is more of a bottleneck for blacks than for whites and consequently expanded financial aid may have a greater impact on increasing Negro enrollments than white enrollments. Furthermore, the evidence is clear that Negroes are less academically prepared for college and therefore can be expected to have more difficulty completing current types of degree requirements.

In Section A we saw that the data concerning the effects of student aid were very ambiguous. Earlier studies indicated that motivation and poor academic preparation were the main bottleneck to increasing lower class enrollment, with money being a significant but considerably less important factor. One recent study gave much more weight to financial problems. The data concerning Negro students are even more inadequate. Relatively few studies have been conducted on the effects of financial assistance on Negro students per se. Those that have been conducted rely for the most part on samples that are not representative of the total population (e.g., Burgdorf, 1969).

There are, however, data suggesting that the processes which determine relative educational attainment among Negroes are approximately the same as those that determine white attainment. (Another way of saying this is that once there has been control for racial discrimination, attainment of Negroes is determined by the same factors as attainment of whites.) Beverly Duncan (1967: 363-367) has studied the influence of family background factors on the educational attainment of whites and nonwhites. The four independent variables studied are: (1) family type, i.e., either a broken or intact family; (2) the education of the head of the household; (3) occupational status of the head of the household; and (4) number of siblings. The dependent variable is, of course, years of schooling. The essential findings are presented in the form of coefficients in Figure 7.1.

In one sense some of the relationships are significantly different for the white and nonwhite populations. For example, the effect of having an intact family on increasing the number of siblings is about six times as high for nonwhites as for whites. The effect of higher education on reducing the number of siblings is over twice as high for whites as for nonwhites. The direct effect of fathers' education is considerably stronger for nonwhites while the effect of fathers' occupation is weaker. Other smaller differences are also apparent.

But these differences must be seen in the context of the relatively small amount of variance that is accounted for by the model as a whole. All of the linkages are relatively weak so that the differences that do exist are small relative to the amount of variation possible. Consequently, it is probably more accurate to stress the general similarity between the processes which determine white and nonwhite educational attainment--once the differences due to color as such have been held constant. To put things



Panel A: White

F
V
X
S
E
.027
-.015
.469
.090
.035
.232
-.204
-.203
-.191
.265
.94
.84

Panel B: Non-white

F
V
X
S
E
.009
.021
.357
.089
.210
.304
-.083
-.118
-.137
.128
.96
.91

Figure 7.1.--Path diagram of the influence of family type (F), head's education (V), head's occupation (X), and siblings (S) on educational attainment (E) for native civilian males aged 27 to 61, by color: United States, 1962.

Source: Beverly Duncan, 1967.

another way, the vast majority of the differences in the educational level of whites and nonwhites is not due to differences in the way their educational career is affected by the background factors considered in the Duncan model. Moreover, the overall effect of these background factors is weaker for nonwhites, so that in a certain sense nonwhites are less affected by their social backgrounds than whites--once the factor of color as such is taken into account.

Jaffe and Adams (1969) use quite different variables, but also find that the processes influencing educational attainment are quite similar for both whites and Negroes. They focus on the noneconomic factors that determine whether or not high school students plan to attend college. More specifically, they conclude that the primary noneconomic deterrents to high school seniors making plans to attend college are negative high school counseling, failure to take a college preparatory curriculum, and a relatively negative self-image. For our purposes the important finding is that these factors operated within each racial group. "Minority and majority students plan or do not plan on college largely in terms of identical predictive variables, but they do so relative to the distribution of these variables within the racial groups (Jaffe and Adams, 1969: 131)." That is, black students decide on whether they are "college material" by reference to their relative performance within their own racial group. Moreover, the factors, and relationships between the factors, which influence their decision are essentially the same as those influencing whites.

The Duncan and Jaffe-Adams studies have been cited to illustrate the thesis that the processes which influence college attendance are quite similar for whites and blacks. To the extent that this is so these processes would presumably be affected in similar ways by the further expansion of student financial aid.

Now we must qualify this thesis in several respects. First, if lack of financial resources is in any sense a significant deterrent to college attendance or completion, it obviously has more impact on Negroes than whites--as groups--simply because blacks are poorer. The most recent data relevant to this point are shown in Table 7.1.

TABLE 7.1

INCOME DISTRIBUTION FOR PARENTS OF BLACK AND NONBLACK COLLEGE FRESHMEN: 1968
(In Percentages)

	Black	Nonblack
Less than $4,000	30.7	4.8
$4,000 - $5,999	24.8	9.4
$6,000 - $7,999	17.0	15.4
$8,000 - $9,999	10.5	17.3
$10,000 - $14,999	10.7	28.2
$15,000 - $19,999	3.8	11.7
$20,000 - $24,999	1.4	5.5
$25,000 - $29,999	0.5	2.7
$30,000 or more	0.6	5.0

Source: American Council on Education, 1969: 45.

That the families of Negro freshmen are concentrated in the lower income groups is not surprising, but to find such a high concentration is unexpected. The index of dissimilarity for the parents of white and Negro

1968 college freshmen is 42.9, compared to an index of about 20.5 for all heads of families in 1967. Therefore lack of money would appear to be more of a bottleneck or critical factor for Negroes than for whites.

In a study of 1,519 Negro students who sought some type of aid from the National Scholarship Service Fund for Negro Students to enter integrated colleges, Clark and Plotkin found that financial reasons were clearly the primary reason for dropping out of college. They claim that their findings are supported by a number of other studies which show that unlike whites--who seem to drop out for other reasons--the primary reason for Negro attrition is lack of money (Clark and Plotkin, 1963: 20ff). Two factors must be considered in interpreting their findings: first, their sample was a select group of relatively able students; secondly, the study focuses on the 1952-1956 period and therefore is somewhat out of date.

More recent data, however, confirm that Negroes still perceive financial problems as more of a barrier to college completion than do whites. ACE data on the 1968 freshmen relevant to this point are shown in Table 7.2.

Nearly three times as many Negroes as whites consider finances a "major concern." Nonetheless it is still somewhat surprising that only about 21 per cent of the Negro freshmen consider finances as a major concern. This greater concern is paralleled by a greater tendency for blacks to depend on loans or scholarships as a major source of financial support. For 1968 freshmen, 61.7 per cent of the blacks compared to 29.9 per cent of the nonblacks relied on such sources (American Council on Education, 1969: 45). These figures, of course, do not say anything about whether Negroes receive more or less than whites relative to their financial needs.

TABLE 7.2

PERCENTAGE OF BLACK AND NONBLACK COLLEGE FRESHMEN WHO EXPRESS VARYING DEGREES OF CONCERN ABOUT FINANCING THEIR EDUCATION, BY TYPE OF INSTITUTION: 1968

Type of Institution and Race	Degree of Concern			Total
	None	Some Concern	Major Concern	
All institutions				
Black	21.0	58.4	20.6	100.0
Nonblack	36.1	56.2	7.7	100.0
Predominantly white 2 year colleges				
Black	27.3	55.9	16.9	100.0
Nonblack	38.8	53.8	7.4	100.0
Predominantly white 4 year colleges				
Black	18.1	60.1	21.8	100.0
Nonblack	34.3	57.7	8.0	100.0
Predominantly Negro 4 year colleges				
Black	19.2	57.9	23.0	100.0
Nonblack	29.1	56.5	14.3	100.0
Predominantly white universities				
Black	20.1	61.6	18.4	100.0
Nonblack	35.5	56.8	7.7	100.0

Source: American Council on Education, 1969: 45.

The second qualification--equally obvious--is that Negroes as a group are less academically prepared than whites.* The factors involved in this poorer preparation and their relative importance are much in debate. But even if blacks receive significant amounts of compensatory education, the current generation of blacks will be unlikely to progress through and graduate from college at rates as high as those of whites--assuming equal academic standards.

What can be concluded about the probable effects of increasing the amount of student aid available for blacks? First, it seems that at the level of the individual the weights of the various factors which determine whether a person will attend college are about the same for blacks and whites, once race is controlled. For example, the relative weight of money, academic, and motivational factors is the same for black and white individuals. However, since a much larger percentage of blacks are in the low income groups, supposedly money is a critical bottleneck for a much higher proportion of the blacks than whites. Consequently, aid would supposedly make a significant difference for a relatively high proportion of black high school seniors and consequently raise black enrollments at a higher rate than for whites. However, the lower academic preparedness of blacks is likely to produce a high dropout rate, which will partially offset the gains in enrollment. Overall, however, expanded student aid will probably have a significant impact on the educational attainment of blacks.

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*For comparisons of grade distributions see American Council on Education, 1969; for comparisons of SAT scores, see Doerman, 1968; for comparisons of the average achievement test scores for predominantly white and predominantly black colleges see College Entrance Examination Board, biannual.

Concluding that student aid will help to increase the number of blacks entering and progressing through the higher education system is little comfort in itself. But this must be related to the two other "optimistic" findings. First, Negroes have been able in the past to increase their educational attainment rates fast enough so that they have been able to significantly close the gap between blacks and whites; it has not been simply an "inflationary spiral" with everybody getting more schooling, but whites staying far ahead. Second, in the recent past Negroes have been increasingly successful in translating their gains in education into better jobs and higher income and it appears that this trend will accelerate in the future--especially for those blacks who have a college education. Consequently, expansion of opportunities for higher education through federal aid can probably make a significant contribution to reducing social inequality.

C. Educational Inflation: The Prospects and Problems of Expanding the Availability of Educational Credentials

8. Planned Educational Inflation

a. Introduction.--In the previous chapters it was assumed that efforts to reduce the inequality in educational attainments would involve helping the underprivileged to acquire the types of academic skills and knowledge similar to those held by individuals with higher levels of formal schooling. In this chapter we will disregard this assumption and ask what would happen if the levels of college certification were increased faster than any gains in "real" academic skills and knowledge. Another way of possing the same question is to ask what would happen if educational standards were lowered in order to decrease the time and effort required to obtain the credentials of higher education, e.g., a college degree.* Would this be likely to increase or decrease the degree of inequality with respect to educational credentials and occupational status?

Such a procedure would be analogous in many ways to planned economic inflation in which the government meets its obligations by deficit financing or by printing additional money. Economic inflation of this type frequently has a significant effect on redistributing the wealth of a society. For example, the prices of consumer goods and unionized labor usually increase faster than salaries, with merchants and organized labor gaining at the expense of government officials, teachers, etc., debtors gain and creditors lose.

This question of whether planned educational inflation will reduce inequality must be broken into two parts. The first concerns how different types and rates of inflation will influence the distribution of educational credentials among those from different class and racial backgrounds. For example, will the gap between the percentages of whites and Negroes with college degrees be increased or decreased?

The second part concerns how changes in the distribution of educational credentials will influence the distribution of occupational status and income.* This is largely dependent on how the labor market would respond to educational inflation. As the number of people holding degrees increased, would employers raise or change their educational requirements? Would they clearly distinguish between those with "easy degrees" and those with "regular degrees?" How quickly would such responses develop and what would be the effect of a temporary lag?

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*As used here "certification" and "credentials" means any socially reorganized and formalized measures of academic achievement, whether a bachelor's degree, an associate degree, or simply a transcript showing the completion of a certain number of courses with a certain average grade. However, the discussion will be focused at the level of the college degree in order to simplify the analysis.

*For our purposes it can be assumed that the latter is determined primarily by the former.

b. The distribution of educational attainment.--A major determinant of the effects of educational inflation on the distribution of credentials is whether the inflationary process is general or selective. General inflation will be defined here as expanding the number of individuals with higher education credentials by easing the academic requirements for everyone. By selective inflation we mean easing the requirements primarily for those from underprivileged backgrounds while maintaining academic standards for most students.

(1) The effects of generalized inflation.--The effect of generalized inflation on educational equality is obviously dependent upon whether the additional ("easy") credentials go primarily to the privileged or the underprivileged.

Taking into account the current rates of college enrollment and completion, it seems very likely that under generalized inflation most of the additional degrees would go to those from relatively privileged backgrounds. While part of this material was covered in Section A, let us briefly review some of the more relevant information. In 1966 about 70 per cent of the students came from families who had incomes above $7,500 (U. S. Bureau of the Census, 1969d). This seems to hold for more recent cohorts also. In the fall of 1968, 53 per cent of the freshmen came from families with incomes above $10,000 while 68 per cent came from families with incomes above $8,000 (American Council on Education, 1968: 39). Data showing the proportion of 1965 high school graduates who enrolled in college by 1967 illustrate the same thing from a slightly different perspective (U. S. Bureau of the Census, 1969c). Eighty-two per cent of those whose fathers had four years of college had enrolled by February 1967. With respect to income, 61 per cent of those whose families earned between $10,000 and $14,999 had attended college, while 87 per cent of those with family incomes in excess of $15,000 had enrolled.

These data indicate two things. First, if credentials were made easier for all attending college, those from underprivileged backgrounds would initially benefit very little simply because they make up such a small proportion of the college population. Secondly, if entrance requirements were eased for all there is still room for additional enrollments by members of the middle and upper classes. For example, nearly 40 per cent of 1965 high school graduates from families making between $10,000 and $15,000 had not enrolled two years after high school.

While little information is available, academic standards are probably the main barrier to increased upper class enrollments, while those from the lower class are also influenced at least as strongly by lack of financial support, family encouragement, etc. Consequently, it seems reasonable to assume that lowering entrance requirements across the board would, at least initially, stimulate upper class enrollments as much or more than enrollments from the lower classes.

The same situation holds with respect to college completion. No recent data on graduation rates by socioeconomic status are available, but the attainment figures for the total population show that in 1968 only 14.7 per cent of those between 25 and 29 had completed four or more years of college. The rate for this age group is supposed to reach 15.2 per cent in 1970 and 16.2 per cent by 1975 (U. S. Bureau of the Census, 1969g). If we assume that all of these individuals were from families with above median incomes it would mean a completion rate of only 30 per cent for this group. Even if we assumed that they were all from the upper income quartile it would mean a completion rate of only 60 per cent--which is too low to produce any significant ceiling effect.

Moreover, academic factors appear to be the main impediment to the completion of college degrees among this group. Consequently, reducing the academic requirements would probably enable nearly all of those from upper class backgrounds to obtain degrees.

In conclusion, a general lowering of academic standards would probably increase the gap between the level of educational credentials held by the privileged and those held by the underprivileged.

(2) The effects of selective inflation.--As indicated above, selective inflation means lowering educational requirements only for those from underprivileged backgrounds. Data are not available to illustrate the effects of lowering standards for those from low SES backgrounds per se. It is possible, however, to estimate what would happen at the bachelor's degree level if race were used as the selective criterion and all of the "easy degrees" were given to Negroes. (This is not to say that all college educated Negroes would receive "easy degrees." Degrees awarded through planned inflation would be in addition to the degrees earned by blacks in the normal course of events.) Consequently, we shall attempt to estimate what would happen to the Negro and white college attainment rates if various numbers of "easy degrees" were awarded to Negroes. The focus will be on 1968, measured by the Census Bureau's Current Population Survey in March of that year (U. S. Bureau of the Census, 1969f). The question asked will

be what the actual attainment rates for those 20-24 years old were as compared to what the rates might have been for this cohort if additional degrees had been given to Negroes in the preceding three years. The results of this hypothetical exercise are shown in Table 8.1.

TABLE 8.1

THE HYPOTHETICAL IMPACT OF VARIOUS LEVELS OF EDUCATIONAL INFLATION ON THE PERCENTAGE OF NEGROES WITH FOUR OR MORE YEARS OF COLLEGE: 1968

Actual Situation--1968

1. Number of degrees actually granted:

1964-65	535,000
1965-66	551,000
1966-67	584,000
3 year total	1,670,000

2. Actual attainment rates for 1968--percentage of those 20-24 with four or more years of college:

Total population	8.4
White	8.8
Negroes	4.2

Hypothetical Situation--1968

1. "Additional" degrees granted if three year total had been inflated (i.e., increased) by various percentages:

2.5 X 1,670,000	41,750
5.0 X 1,670,000	83,500
10.0 X 1,670,000	167,000

2. Estimated Negro attainment rates--percentage with four or more years of college--if all the "additional" degrees had been given to Negroes:

Level of Inflation	Attainment Rate
2.5	5.7
5.0	8.6
10.0	12.9

The methodology involved in making these estimates is explained in the appendix at the end of this chapter.

The significant finding is that a 5 per cent rate of inflation would have almost eliminated the difference in formal credentials. That is, if the total number of degrees normally granted was expanded by 5 per cent and all of these were awarded to Negroes, the percentage of each age cohort receiving degrees would be about equal.

It is important, however, to view this finding--which would probably be characterized by some as surprisingly encouraging--in relationship to several other considerations. First, the measure of attainment used was the percentage of the 20-24 age group with 4 or more years of college. Clearly, however, significantly larger proportions of whites than Negroes continue into graduate school. For example, of the 1,703,000 whites 25-29 with at least 4 years of college in 1968, 571,000 had 5 years or more. That is, about 33 per cent of the white graduates had at least a year of graduate work.* Of the Negroes, 60,000 had 4 years of college while 9,000 had 5 or more years, i.e., about 13 per cent had done graduate work. Moreover, the key feature of an inflationary program is to give out degrees that are less intellectually demanding. If these degrees are given out primarily to Negroes it is very likely that the percentage of Negro college graduates going on to graduate school will actually decrease. However, the percentage of the total Negro population going to graduate school will probably increase.

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*For a small percentage of these, the fifth year may be advanced or extended baccalaureate work.

There is also a possibility that the figures in Table 8.1 overstate the impact of planned inflation because of the age cohort used in the estimation procedures. While most of those in the 20-24 age cohort who will obtain college degrees will have done so, a significant number will receive degrees after age 24* and many will do graduate work later. The data available seem to indicate that during these later years the whites increase their advantage over the blacks. The percentages of those 20-24 years of age who were graduates* in 1968 were 8.8 per cent for whites and 4.2 per cent for Negroes (Table 8.1), or a ratio of .46, while for the 25-29 cohort the figures were 15.7 for whites and 5.7 for Negroes, or a ratio of .36.

Third, admittedly the assumption that all of the "additional" degrees will be given to blacks may be an unrealistic one. Such a specification would probably be difficult to instigate from a political point of view. Secondly, if all of the "additional" or "easy" degrees were granted to blacks, the job market would be more likely to differentiate between "easy" and "regular" degrees. Consequently, a more realistic approach might be to assume that some proportion of the easy degrees would be given to disadvantaged whites. For example, half might be given to blacks and half to whites.* In that case, the rate of inflation would have to be doubled in order to have the same magnitude of effect on equalizing black and white attainment rates.

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*A study of 1958 graduates showed that 31 per cent were above age 24 (Sharp, 1963: 11).

*Actually, those with 4 or more years of college.

*The half and half proportions are only used for purposes of illustration. What the "proper" proportion would be is largely a political and ethical question which we have not attempted to resolve.

Despite these qualifications it does seem reasonable to conclude that educational inflation in the range of two and one-half to ten per cent could have a significant effect on equalizing--between blacks and whites--the distribution of higher education credentials if the "easy degrees" were reserved specifically for those from disadvantaged backgrounds. Whether such a redistribution of educational status symbols could be translated into significant gains in occupational status and income is the question to which we now turn.

c. The response of the job market

(1) The interaction between attainments and requirements.--Will the new easy degrees which would be used to equalize the distribution of educational credentials be honored in the job market? This is the critical factor in determining whether planned educational inflation will have an effect on the distribution of occupational status and income.

Essential to answering this question is some understanding of the role of education and educational credentials in occupational screening, i.e., the process by which employees are hired and promoted. It seems to be part of the conventional wisdom that not only are higher levels of education required by employers, but that education now has more effect on one's achievement--relative to other factors--than in the past.

Considering how generally the proposition is accepted, there is surprisingly little reliable quantitative data concerning the question.*

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*Probably the best supportive data available is found in Peter Blau and Otis Dudley Duncan's The American Occupational Structure (1967: 178-180). They conclude that the influence of education on careers (but not on first jobs) has become more pronounced over time, but the magnitude of the increases is rather modest.

There is even less knowledge about the dynamics of the processes which produce such a trend. Some relevant questions are: to what extent do the jobs which make up the occupational structure actually require a higher level of knowledge and skill than in earlier periods? Do people with more schooling usually perform better? Or, as more people receive more schooling, do employers raise their educational requirements even when they are not relevant to job performance? As the service sector of the economy expands--where production is frequently difficult to measure--do employers depend more heavily on schooling as a criterion in both employment and promotion simply because it is easily quantified? To deal with all of these issues is neither necessary nor possible, but we must examine selected aspects of the societal dynamics of the occupational screening process in order to clarify the actual importance of academic certification to the job.

Since our concern is with how the job market is likely to respond to planned educational inflation, the interaction between requirements and attainments is the focus rather than simply the separate trends. This problem has two aspects. The first concerns how employers react to increases in the general level of education--whether its source is planned inflation or some other social process. For example, when the percentage of people with a college education increases, how quickly do employers raise their educational requirements? The second problem concerns the extent to which employers would distinguish between easy degrees and regular degrees. For lack of a better terminology we shall refer to these as nondiscriminant and discriminant responses.*

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*A note on terminology may be useful here. The categories of nondiscriminant and discriminant responses cut across the categories of general and selective inflation. The types of inflation focus on which socioeconomic or racial groups receive the easy degrees. The types of response deal with how employers are likely to respond to the effects of planned educational inflation. Nondiscriminant response deals with how the job market--more specifically the occupational screening process--is likely to respond to any large increase in the level of educational attainment. Planned educational inflation--and it could be either general or selective--is one of several possible causes of such an increase. Later in the discussion, nondiscriminant response is described in terms of two ideal types which are further subcategories of nondiscriminant response and not by definition related to any of the other categories. Discriminant response deals with the job markets' response to easy degrees, per se. Do employers seek to distinguish between easy and regular degrees, are they able to do so, and what is their response?

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(2) Nondiscriminant response

(a) Conceptualizing the nature of the problem.--Here we are dealing with three attributes or variables, each one related to a different unit of analysis. The first unit is the occupation structure. The relevant attribute is the distribution of occupational status with respect to the socioeconomic origin of those who make up the structure. The second unit of analysis is the screening procedure used by employers, and the related variable is the number of years of formal schooling that are generally required to obtain specified jobs. The third unit of analysis is a series of age cohorts whose members pass through the screening procedures and take up positions in the occupational structure. The relevant attribute is the distribution of formal educational credentials by race and socioeconomic background. The question posed is how changes in the distribution of formal credentials within subsequent cohorts (variable 3) will effect the educational screening criteria (variable 2) and how the subsequent screening process that occurs over a period of time will influence the subsequent distribution of occupational status within the occupation structure (variable 1).

(b) Nondiscriminant responses: types of variation and their consequences.--Since our independent variable is change in the distribution of educational credentials (variable 3), the first step is to examine the types of changes that can occur in it. This is most conveniently handled by formulating two ideal types.

The first type is one in which both the privileged and the underprivileged increase their level of credentials, but the gap between them remains more or less the same. It is possible for the underprivileged to increase their relative share of the occupational status if the screening requirements are not raised a proportionate amount. This can probably be illustrated best by assuming that the shape of the frequency distribution of the years of schooling is approximately the same for both privileged and underprivileged, e.g., whites compared to Negroes.[*] Figure 8.1A shows a hypothetical distribution of each group at t_1. Here the "education requirement for the average high status job"--an artificial hypothetical concept--is shown as 14 years of schooling. In this situation, about 6.7 percent of the whites and 2.3 per cent of the blacks[*] have the necessary educational qualifications for high status jobs.

In Figure 8.1B both groups have raised the level of their educational attainment a proportionate amount, and the educational requirement for high status jobs has remained unchanged. In this situation, 30.8

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[*] In the discussion that follows the distributions are shown as more or less normal in order to simplify the illustrations and calculations involved. While the actual distributions are not normal, they are approximately the same shape for both races. The figures used are hypothetical.

[*] That is, the percentage of each population falling above the points which are approximately 1.5 and 2.0 standard deviations above their respective means. By comparing the percentages or proportions of each race, differences in the absolute size of the two populations have been controlled or standardized.

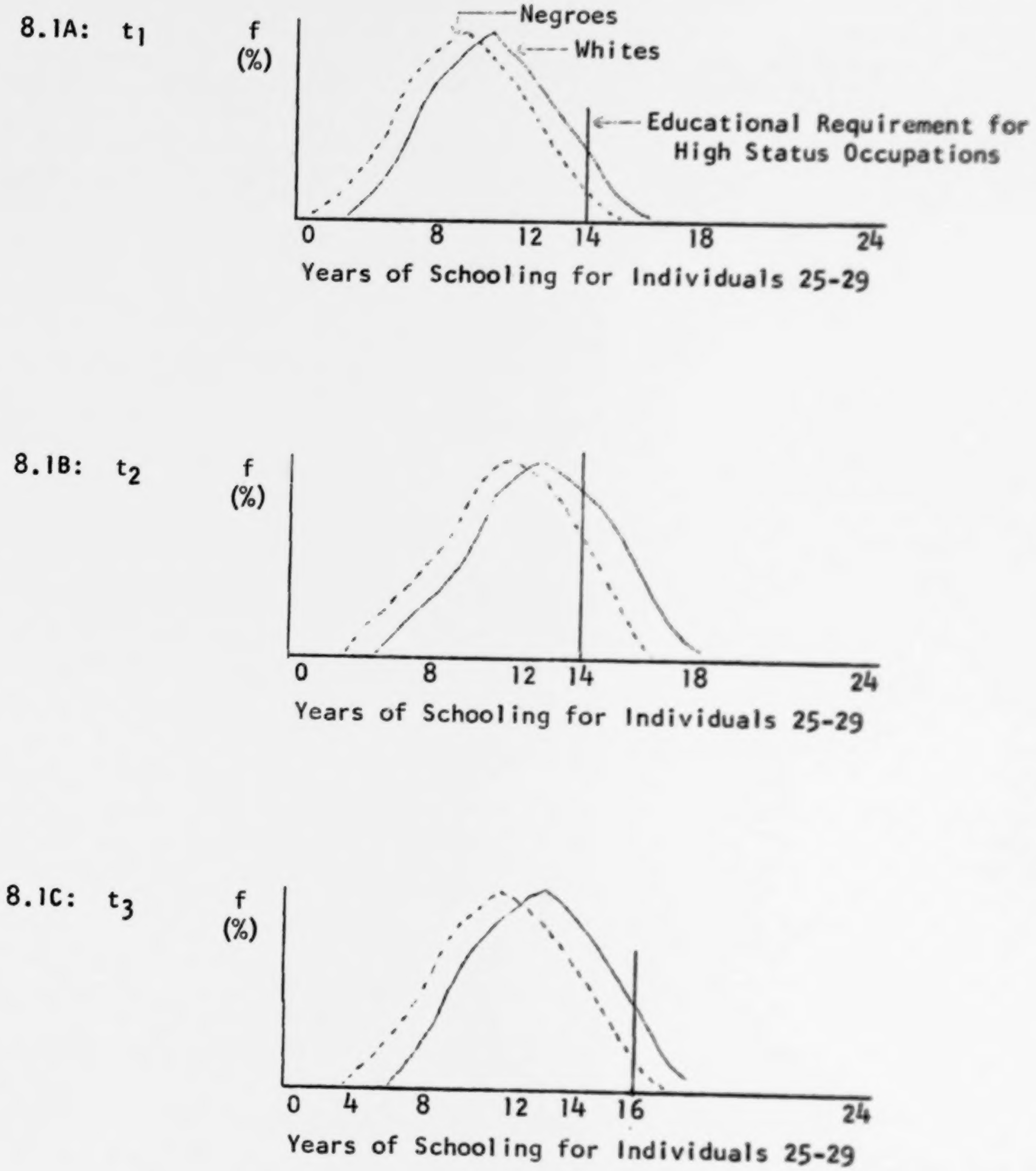

Figure 8.1.--The effects of general increases in educational attainment, followed by increases in educational requirements for high status jobs, on the distribution of occupational status among whites and Negroes--hypothetical data.

per cent of the whites and 15.9 per cent[*] of the blacks fall above the critical point. Now, however, the ratio between the proportions of whites to blacks has been reduced from 3:1 to 2:1 (6.7 ÷ 2.3 compared to 30.8 ÷ 15.9). In Figure 8.1C the educational requirements have been increased to 16 years and the old ratio of 3:1 has been restored.

The most optimistic statement that can be made about such a sequence is that if the educational requirements were not raised for about 50 years, the new cohorts would eventually make up the total population, and instead of the proportion of whites being 3 times as high as the proportion of blacks (the 3:1 ratio of proportions) the 2 to 1 ratio would eventually apply to the whole population. If within 2 to 5 years the educational requirement was adjusted upward so that the ratio was again 3:1, there would be a measurable but slight effect on the distribution within the total population. This would be true for the same reason that a parallel shift in the ratio of black and white infant mortality rates for a similar period of time would not appreciably affect the proportion of whites to Negroes in the total population or differences in the age distribution of each population: there is too little change for too short a time in the social process for significant change in the social structures.

Finally, the most important thing to note about this type of change is that it is not the envisioned result of planned inflation. The whole purpose of such a program would be to increase the level of credentials of the underprivileged at a faster rate than those of the privileged, so that the gap between the two distribution curves would be narrowed and eventually equalized. In such a situation the interaction between increases in attainment by the underprivileged and adjustment in the level of education required for high status jobs is controlled by a different set of parameters and consequently produces significantly different results. We are now ready to explore these alternative possibilities.

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[*] Percentage above 0.5 and 1.0 standard deviations.

The second ideal type of change would produce a faster rate of increase for the underprivileged, thereby changing the shape of the distribution rather than simply shifting it to a slightly higher point. A smoothed out and simplified version of the 1968 percentage frequency distribution of whites and Negroes, aged 25-29, by years of schooling, is shown by the solid lines in Figure 8.2.

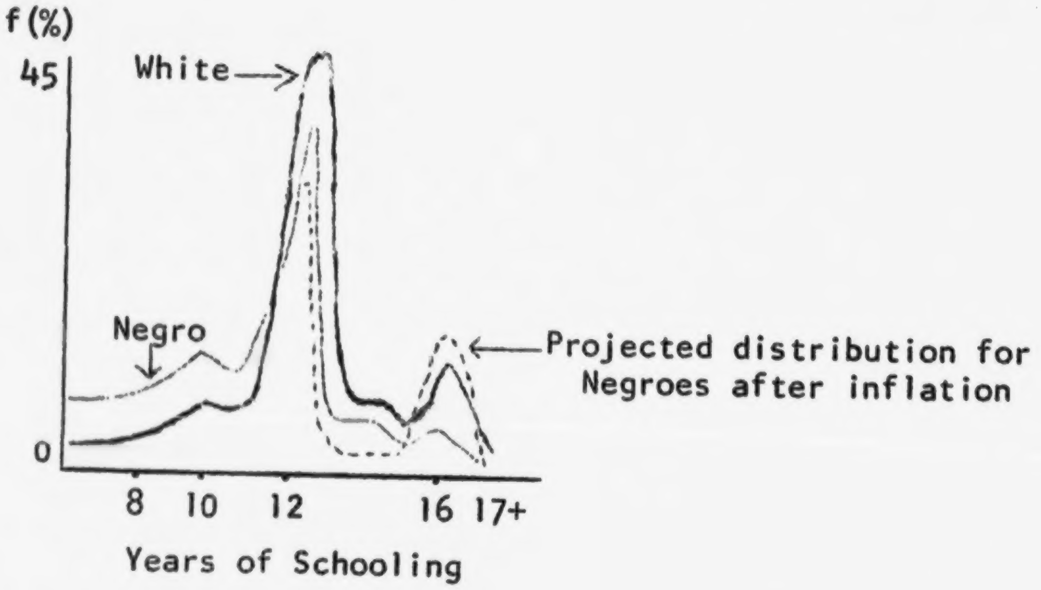

Figure 8.2.--Percentage frequency distribution for years of schooling for whites and Negroes, aged 25-29.

As conceptualized here, a program of higher educational inflation for Negroes would leave the two distributions just as they are below the twelfth year of schooling.* Its effect would be twofold: (1) to take some however, that the increased ease with which blacks would receive higher education credentials might motivate higher proportions of those at the lower levels to stay in school and therefore indirectly affect the shape of the distribution at the lower level. This would, however, be an empirical, rather than a logical consequence.

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*This is true by definition in the sense that lowering the academic requirements for Negroes at the higher educational level does not necessarily affect rates of attainments by Negroes at lower levels. It is possible,

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of the high school graduates and shift them into college, and (2) to cut the attrition rate of those who enter college, thereby reducing the percentage of Negroes with 13-15 years of schooling and increasing proportionately the number with 16 years, i.e., a college degree. The first would be accomplished by lowered entrance requirements and the second by a more or less automatic pass system. An approximation of the resulting change in the distribution is shown in Figure 8.2 by the broken line.

This form of presentation is useful in showing precisely what changes occur, but in certain respects it can be misinterpreted. For example, in the projected distribution shown by the broken line the impression may be gained that the percentage of Negroes graduating from college is higher than the percentage of whites. They are the same, however, because those with 17 or more years of schooling must be added to the number with 16 years--and the percentage of whites with 17 years or more of schooling is about 6 times that of Negroes.

For this reason, when we shift to a consideration of the changes employers might make in the educational requirements for jobs in response to these changes in the distribution of educational credentials, it is useful to plot the distribution in terms of accumulative percentages. This distribution is shown in Figure 8.3A. Any given point on the horizontal axis indicates the percentage of people that have a certain level of education or more.

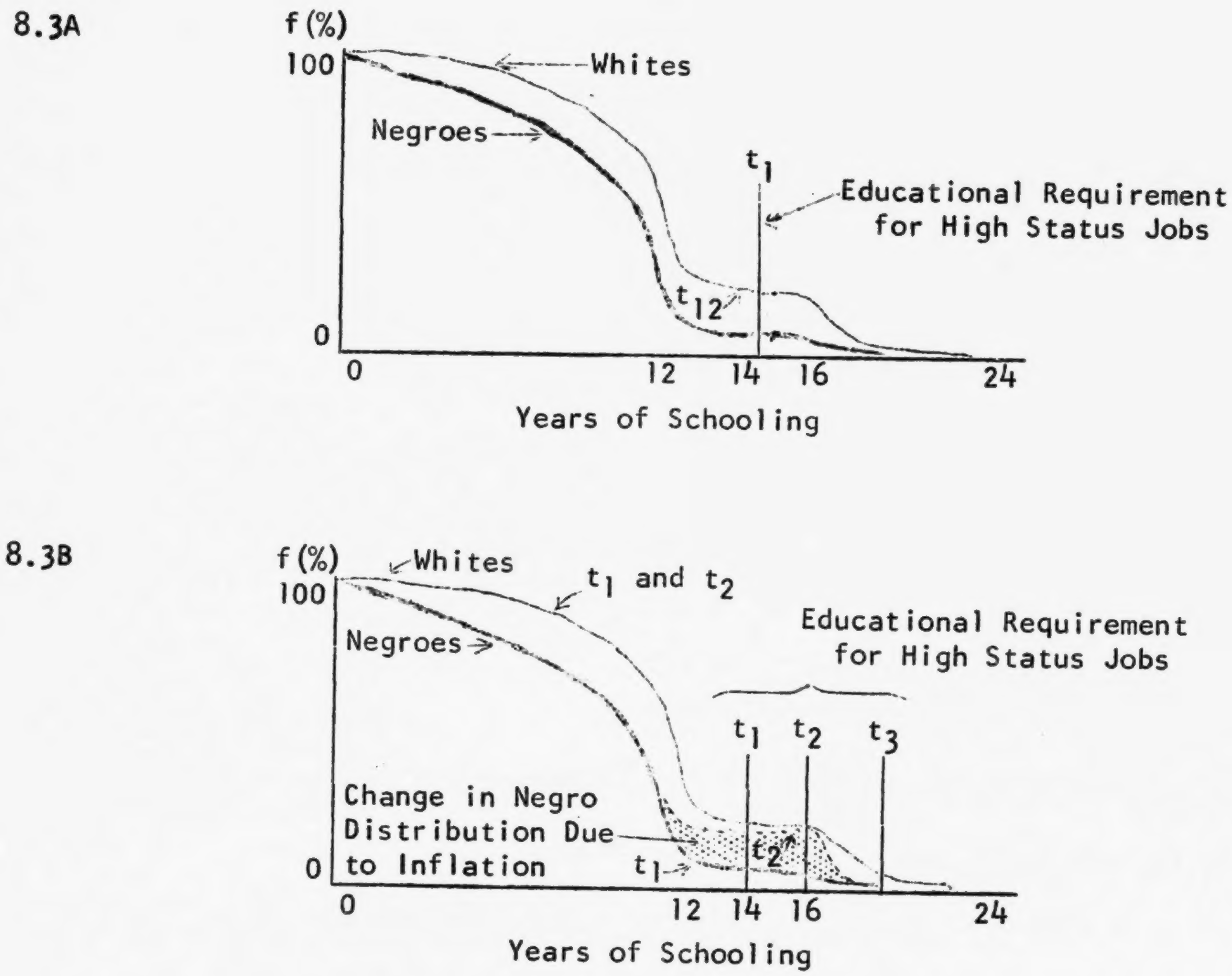

Figure 8.3.--Accumulative percentage distribution of years of schooling before and after inflation and showing shifts in the "education requirements for high status jobs."

In Figure 8.3B the relation of the two distributions is shown if the percentage of Negroes graduating from college were made equal with that of whites. If the educational requirement for high status jobs were left at 14 years of schooling (t_1), the percentage of Negroes qualifying for jobs would nearly equal that of whites and this ratio would eventually be characteristic of the entire population as the older cohorts were replaced. If the educational requirement was raised to 16 years (t_2) this would actually be of advantage to Negroes over the long run since at this level their achievement rates are equal to that of whites because of lower college attrition rates. It would produce less short run effect, however, because the absolute number of Negroes qualifying for high status jobs would be smaller and consequently the old inequalities would be "diluted" at a slower rate. If the educational requirement were raised to 18 or so (t_3) the status of Negroes would improve relative to past conditions, but would never become equal to that of the whites. But, here, an important intervening factor comes into play. Raising the educational requirements higher quickly decreases the absolute number of individuals that are able to qualify for high status jobs. Therefore, it is unlikely that the requirements would be raised high enough to significantly reduce the gains made by Negroes.

All of this is predicated upon the assumption that whites will not increase their levels of certification proportionately by additional graduate work, or if they do an equal percentage of Negroes will also make such gains. To the extent that this assumption does not hold, the situation and outcomes will approach those discussed under the condition of generalized increases in attainment, the first ideal-type.

What would probably occur in reality is something between the first and the second ideal-types. To the extent that the second type is reached there will be reductions in the degree of inequality. However, complete equality will be obtained--even in the very long run--only if the conditions of the second ideal-type are closely approximated.

At this point several elaborations are required. The first one concerns an important intervening variable: the general state of the economy. Up to this point we have implicitly assumed that the general relation between supply and demand for labor has remained more or less stable. The focus of the analysis has been changes that would result from increasing the proportion of the labor supply that have college degrees. An obviously critical mediating factor is demand for labor. If it is high the number of jobs available for college graduates might expand enough to absorb easily all the additional degrees created by planned educational inflation. Under such conditions the educational requirements would probably not be raised, and consequently inequality would be eliminated even faster. On the other hand when demand is slack employers usually attempt to upgrade the level of those they employ, and the prospects of absorbing the increased supply of degree holders would be reduced considerably.

The second specification involves the way the job market operates. Up to now the analysis implicitly assumed that there was a single job market with a single total demand for college graduates and a supply of homogeneously trained college graduates. In actuality there are, of course, a number of separate though partially overlapping job markets for a variety of separate but overlapping occupations. Consequently, the adjustment of educational requirements varies by specific occupation and would be dependent upon the extent to which the increased number of degrees were concentrated in specialties related to such occupations. This is a serious limitation to a program of degree inflation since most of the "easy degrees" would probably be in nontechnical "soft" majors: agriculture, business, education, social work, etc.*--where the demand is usually low relative to "hard" technical majors.

Finally it is essential to remember that the above discussion assumes nondiscriminant response: that the holders of "easy degrees" will be treated approximately the same as the holders of "regular degrees." Now we turn to the question of the conditions under which this assumption is likely to be approximated, and the probable consequences if it is not.

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*Many of the undergraduate social science and humanity majors would fall under this category, but even without inflation there are limited job opportunities for such majors without extensive graduate training.

(3) Discriminant response

(a) Its results and determining conditions.--If employers clearly distinguished between "easy degrees" and "regular degrees"--attributing little status to the former--then obviously very little if anything will have been gained by a program of planned inflation even of the selective type. On the other hand it is by no means necessary that the holders of easy degrees be treated like honor graduates from Ivy League schools. There are currently great variations in the amount of status accorded to different degrees--both in terms of the subject of specialization, but especially in terms of the prestige of the school. The important thing, for our concerns, is that the status differences are informal, continuous, and ambiguous rather than discrete and explicit. Consequently, those from lower quality schools are not treated in a completely different manner from others. (This is not to deny that they have a lower probability of obtaining a job of the same status as graduates from a prestige school.) In contrast, there is a fairly distinct status schism between degree holders and nondegree holders. Some nondegree holders may obtain high status jobs but they usually do so through different channels than those used by degree holders.

Therefore, if educational inflation is to have any effect on reducing inequality it is essential that the holders of easy degrees be assimilated into this diffuse system rather than being clearly differentiated. The rest of this chapter will focus on the conditions which are likely to determine the degree of differentiation.

(b) The degree of inflation and generic visibility.--A key determinant of whether "easy degrees" are treated differently is how socially visible they are as a generic category--that is, the extent to which employers are aware that programs with easier academic requirements are in operation and might be a significant source of some of their potential employees. The latter requirement is very important. Employers will be unlikely to re-examine their hiring criteria if they read in the newspaper that "some college back east" is lowering admission standards for 500 black students. It is quite another thing if he is aware that 20 per cent of the students graduating from the colleges at which he generally recruits were admitted on this basis.

One of the factors that would influence such visibility is the proportion that such degree holders would constitute of the total: how big an influx would be possible without drawing the attention and raising concern among employers? Here, data on past increases are relevant. From 1960 to 1968 the number of degrees granted increased by 72 per cent, or an average annual increase of 9 per cent. In the most recent years for which data are available the annual increase was 17 per cent. Therefore, we can reasonably expect that a combined annual increase of 10 to 15 per cent for both natural expansion and a program of inflation would not in itself cause employers to re-examine their basic assumptions about educational criteria. This presupposes that the demand for college graduates continues to grow at about the same rate as in the past. A significant decline in demand probably always triggers more rigorous screening.

The other factor that is likely to be a critical determinant of generic visibility is how well the holders of easy degrees perform after they are employed. Consequently we now turn to a consideration of the relationship between education and job performance.

(c) Educational attainment and job performance.--The reason we are examining this relationship needs to be kept clearly in mind. If job performance is intricately related to "real" educational attainment, then people who have been granted "easy degrees" will probably not be able to perform higher status jobs adequately. If the holders of "easy degrees" consistently perform poorly it seems likely that employers would soon use additional criteria to screen these individuals. On the other hand, if current educational certification procedures do not accurately predict job performance then many of those who received "easy degrees" would be able to acquire high status jobs and to perform them adequately.

Data relevant to this question are indeed scarce. Ivar Berg (1968: 124-134) has recently studied this issue. A surprising finding in itself is that while nearly all of the employers he studied used education as a criterion in selecting employees, apparently none of them had attempted to correlate their data on job performance with data on educational background. He does not state the exact number of employers studied but notes that one survey--and this was by no means the only source of data--included those from the rubber, steel, packaging, textile, and hospital supply industries.

More important, he found little correlation between education and a variety of job performance and morale measures. In some cases he found a negative correlation. His description of the data is very abbreviated, but only one of the cases seems to involve significant numbers of college graduates. This was the case of a major weekly news magazine that hired both high school and college educated girls as secretaries. It was found that there was little difference in the number of merit pay raises awarded each category. The personnel administrator argued that college girls could be promoted to editorial jobs in the future. However, the data available indicated that the college graduates who held editorial jobs had been granted those positions directly and had not been promoted from the secretarial ranks.

Some of the findings of Jaffe and Adams (1965: 23-27) also suggest that education and job performance are not as closely related as generally assumed. They used 1950 and 1960 census data and the findings of one of their earlier studies to estimate the relationship between increases in educational attainment and increases in industrial productivity. They "cross-tabulated number of years of schooling completed by industries, classified by changes in output per worker, and by changes in employment between 1950 and 1960--for white collar and manual workers separately, and for men and women" (Jaffe and Adams, 1965: 24). They concluded that:

> Comparison of educational levels of employed persons in 1950 and 1960 reveals that there is little, if any, relationship between changes in output per worker and changes in educational levels. This generalization holds true for men and women, and for clerical and sales workers as well as manual workers. (Jaffe and Adams, 1965: 28.)

It must be stressed that these studies by no means definitively prove that education has no effect on job performance, but certainly call into question the assumption that it is the primary cause of increasing productivity. Consequently this suggests that the use of educational attainment as the primary employment screening criterion is at least questionable. Moreover, individuals with "easy degrees" may be able to function quite adequately in at least some sections of the current occupational structure.

(d) Administrative and political factors and individual visibility.--In addition to the question of generic visibility (employers' awareness that some students receive "easy degrees") there is the closely related problem of individual visibility--whether employers can easily identify the specific individuals involved. A very important determinant of this will be the extent to which the academic programs for "special students" are administratively segregated from regular programs.

We hypothesize that the higher the administrative level on which differentiation occurs, the greater the visibility. The most obvious example is that the holders of easy degrees will be highly visible if they all receive their degrees from a few schools especially established to give out such degrees. But there are more subtle variations of this proposition. For example, candidates for special degrees will be more visible if schools and degree programs are established within colleges and universities rather than admitting such students into regular programs and then grading them more leniently.*

A variation on this theme is the question of race and ethnic background. Obviously if all of the recipients of easy degrees are black or Puerto Rican, visibility will be high. But it is also true that black or ethnic studies programs restricted to members of one group will have effects on both the educational experience and the visibility of those who participate in such programs when they enter the job market.

Another important determinant of whether employers would discriminate between easy and regular degrees is the political context. For example, the city government of the District of Columbia would probably be under tremendous pressure to treat graduates from special programs at Federal City College the same as other degree holders. The same would not be true for a small company located in the South. The pressures on national companies with large government contracts or a substantial orientation to urban markets would probably fall in between the two extremes. The same political pressures which caused educational standards to be bent would probably be brought to bear on the employment criterion.

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*We are not necessarily arguing that differentiated programs should never be established, but only suggesting that one of the consequences of doing so will be to increase the ability of employers to distinguish the participants in such programs.

What a program of planned degree inflation does in part is allow the privileged to grant at least some of the demands of the underprivileged for a larger share of the power and wealth without completely abandoning universalistic criteria. This is accomplished by using the manipulation of status symbols, i.e., academic credentials, to quickly remove some of the consequences of past injustices. The implicit assumption which legitimizes such symbol manipulation is that the new distribution of symbols will be given greater authenticity as the academic quality of the special programs is improved in subsequent years.

Finally, it seems worth noting that a great deal of credential inflation is already taking place and will continue in the future. While there are no reliable data, the vast expansion of the higher education system in recent years has almost certainly increased the variations in quality. This is not to say that the best, or even most, schools have lowered academic standards, though they probably have in some cases. However, to assume that the multitude of institutions which have been created or formally upgraded (e.g., from a teachers college to a state university) are academically on a par with good quality, established institutions would seem extremely unreasonable. Yet these institutions regularly award academic credentials that are formally on a par with those of other institutions. Given the general structure of U. S. society, the continuation of this process is almost inevitable. Consequently, the issue of credential inflation is not whether there will be any--there will. Rather the questions are: (1) whether the process will be deliberately accentuated through planning, and (2) whether it will be selective, i.e., benefitting primarily those from underprivileged backgrounds. On the basis of what has necessarily been an exploratory analysis, we suggest that planned selective educational inflation might constitute an additional tool with which to increase equality of opportunity and reduce social and racial inequality.

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APPENDIX I-A

Methodology for Estimates in Table 8.1

A major substantive assumption of this methodology is that the reaction of the job market to educational inflation will in large part be determined by (1) the absolute number of new degrees coming into the job market at any one time, and (2) the proportion of these degrees that are "easy" compared to the proportion that are "regular." The reason for these assumptions are elaborated throughout the discussion of section c, "The response of the job market."

Because of this substantive assumption it is desirable to measure inflation in terms of the percentage increase that the additional "easy degrees" constitute over the expected number of "regular degrees."

The most meaningful way of measuring the impact of inflation on the distribution of credentials is to ask: of those just old enough to have completed their formal schooling, what percentage of the whites and what percentage of the Negroes will have obtained a college education. The methodological problem then becomes one of relating the number of degrees awarded in a given year or set of years to the college attainment rate of a relevant age cohort.

The 25-29 age cohort is generally considered the youngest cohort to have completed its formal education. However, it is much easier to relate a slightly younger cohort to the number of degrees awarded in a specific set of years; and the stronger this relationship the greater the degree of accuracy in predicting attainment from degrees awarded. Consequently, we selected the 20-24 age cohort to measure attainment, gaining in degree of accuracy with respect to immediate projections and sacrificing the degree to which the projections will be valid measures of longer run trends.

Specifically, the number of those from 20 to 24 years of age who had received 4 or more years of college* were related to the number of degrees that had been awarded in the 3 preceding years.* For example, the number of those ages 20 to 24 who in March 1968 reported 4 or more years of college was related to the number of degrees awarded during the academic years of 1964-65, 1965-66, and 1966-67.* These 2 sets of figures were obtained for the last 5 years and correlated using Pearson's r. The correlation coefficient was surprisingly high, .985, and was significant above the 1 per cent level.

It is true that a fairly high coefficient is to be expected because we are in large part correlating two measures of the same thing. However, the two measures are by no means identical. First, a large number of the degrees awarded each year go to those older than 24. Secondly, the Current

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*As measured annually in March by the Census Bureau's Current Population Survey, Current Population Reports, Series P-20, Nos. 138, 158, 169, and 182, i.e., U. S. Bureau of the Census, 1965, 1966, 1968c, 1969f.

*As indicated in the Projections of Educational Statistics to 1977-78, U. S. Office of Education, 1969, p. 31, i.e., U. S. Office of Education, 1969a: 31.

*While the age cohort covers 5 years, only 3 academic years were used because most of the age cohort would have been 20 years old or less during those earlier years and unlikely to have earned a degree.

Population Survey would measure degrees earned abroad, while the OE figures do not. Similarly the OE figures include degrees granted to foreign students who may have left the United States by the time of the relevant Current Population Survey. In the third place, the Census Bureau measures educational attainment each year in March while the OE data covers the academic year--leaving a considerable lack of congruence. For example, the January 1968 graduates would be included in the March 1968 survey, but not included in OE's degrees-granted figures for 1966-67. What the very high correlation coefficient indicates is that these factors were proportionately very constant over the five year period measures.

A regression line was fitted and an equation developed to predict the increases in number of people of ages 20 to 24 with 4 or more years of college from the increases in the number of degrees awarded in the 3 preceding years. The increases in the 20-24 age cohort that would have resulted in 1968 from 2.5, 5.0, and 10.0 per cent increases in the number of degrees awarded in 1964-67 were calculated. These were added to the actual number of Negroes who had 4 or more years of college in 1968. From this, the percentages of Negroes that would have had college degrees under the varying assumptions of 2.5, 5.0, and 10.0 per cent increases were calculated. These are the hypothetical figures shown in Table 8.1.

A limitation of this estimation procedure is that it assumes that the age distribution of white and Negro degree recipients is the same. In fact, blacks tend to be a little older. But it seems unlikely that the assumption is violated seriously enough to significantly affect the estimates.

(4)

II. HIGHER EDUCATION IN AN ACTIVE SOCIETY

A strategy of cross-commitment to three developments is proposed: (a) a year of national service; (b) greater protection of teaching from research (and the liberation of education from instrumental training); and (c) new measures to advance equality of opportunities in higher education.

A. Introduction

1. Our Perspective

Like generals preparing to fight again the last war in the next engagement, many features of the American system of higher education are past rather than future oriented. At present, the American college and university system is best at preparing students for a society which is committed primarily to the production of commodities, while the society is reorienting toward a growing concern with the Good Life. Also, the system of higher education is fragmented into myriad decision-making points although a capacity for drawing national lines is becoming increasingly necessary.

The following changes in the American system of higher education are suggested in order to orient the system more toward the society in which its graduates will live and also to help make the society more one in which they will wish to live. Thus, in these calculations we take into account both where we see the society going and where we find it must go, if it is to provide a meaningful life responsive to the needs and values of its changing members.

The system of higher education is not expected to serve as a lever to change society; higher education is not that powerful. It tends more to reflect where society is going than to determine its course. Still, the educational system can significantly add to or subtract from the forces influencing social change, whose main sources lie elsewhere. While, at present, the system seems to add to the alienation of significant segments of America's youth and to fail to provide opportunities for them to engage in constructive projects, the introduction of a year of national service would provide a concrete and legitimate outlet for the idealism of youth, through work which is not self-serving but rather advances societal causes ranging from social justice to beauty.

Although present commitments to research eat into the resources of those institutions of higher education which should see teaching as their primary mission, the introduction of a greater separation of research-universities from teaching colleges may serve to protect teaching in general, and liberal arts education in particular. Greater support for teaching will help to ensure that the increasing specialization of academic fields will not erode the humanizing elements of higher education, and that the future society will be less technocratic and fragmentary, more meaningful and wholesome.

At present, increases in the equality of opportunity in higher education seem, at best, to advance at the pace of a drowsy snail. New approaches seem necessary if this goal is to be seriously advanced. The introduction of a combination of changes including "open enrollment," compensatory education, alterations in testing and admission requirements, ethnic studies and other changes explored below, may help. The question of where the considerable resources such a program requires may come from is also explored below.

A by-product of all these suggested changes--making higher education more equally available and more expressive, providing greater protection of teaching from research, and tying higher education more closely to meaningful national projects--will be a reduction in the alienation and rebellion of the students. We cannot stress sufficiently that we do not urge that higher education should be changed in order to reduce campus or street disorders. It ought to be changed in order to make the system more effective in leading toward a "person-centered" society* and more responsive to the society's needs as well as those of the students. In no place do we advocate changes that we do not see as otherwise justified only to "cool out," or to reward, unrest. Nor do we believe that one can deal with unrest per se; the underlying issues must be faced sooner or later and whatever decline in unrest that results from this process is a bonus.

We should also state explicitly that the changes in higher education which are suggested in the following pages assume a changing and changeable society. Many of these suggested changes make no sense if we sought to reproduce yesterday's society tomorrow, and they could not be effectively achieved unless society were also changing.

The recommendations which follow may seem to advocate a fundamental departure from existing practices. And, it is true that they involve more changes in the system than most suggestions made recently which involve mainly financial transactions such as loans, fellowships, or new grants to colleges. Of course these new financial procedures may be adopted in addition to the changes we propose. However, it is our proposition that unless the new federal fundings of higher education are coupled with the kinds of more fundamental structural changes suggested here, the basic reorientation of higher education in America which seems necessary will not take place. We hence beg the reader's tolerance for what may at first seem as far-reaching departures until we can account in detail for the reasons they are necessary and may be feasible, and have a chance to show that frequently our suggestions only explicate trends already developing within the system.

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*On this concept and its relation to higher education see Willis W. Harman, "The Nature of Our Society: Implications For Schools," paper prepared for the ERIC Clearinghouse on Educational Administration, Eugene, Oregon; October 1969.

The role for the federal government in higher education envisioned in the following is both more active and less directive than it has been in the recent past.* We see most universities as conservative bodies, very reluctant to change. As there is no national center for policy making for universities, a change in program has often required a slow and highly complicated process of decision-making at 2,000 odd institutions, hundreds of cities and towns, and 50 states. Under these circumstances it is necessary for some outside body (a role recently assumed with some frequency by foundations) to initiate new thinking and new plans, promote a debate, demonstrate the merits of innovations, and finance, at least in part, the innovations. This is not to say that the actual decisions as to the direction of higher education can or should be taken over by the federal government. Possibly, the suggested alterations would even reduce the power of the federal government in this area, an area in which it has become a major force, although not in a deliberate and planned way and without allowing for the system effects of its projection into higher education. The main projection so far, which took place through the provision of categorical support for research, sought to serve national needs (e.g., buying needed applied research) and also had some desired system effects (the support of higher education, especially graduate education, in years during which direct support seemed not "politic"). However, other system effects--especially the weakening of teaching--were not intended, not anticipated, at first barely noticed, and later ignored or bemoaned. Now they are to be faced. It is time now, not to increase the total federal impact, but, being more mindful of its ramifications, to substantially redirect it, and maybe even to reduce the extent of federal intervention.

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*For a detailed sociological analysis as to how guidance can be made more effective without making it "tighter," see Amitai Etzioni, The Active Society (New York: The Free Press, 1968).

2. A Note on the Strategy of Cross-Commitment

"Cross-commitment" refers to a strategy through which benefits are achieved when two or more goals are advanced simultaneously along one or more avenues of approach. For example, it has been argued that fighting pollution and poverty jointly makes fighting each easier.* Here we seek to indicate the reasons why we concluded that the introduction of a year of national service, a significant increase in equality of educational opportunities and an increase in the protection of teaching from undue infringement by research may be easier to achieve simultaneously than independently. In the following lines we seek to illustrate this principle; a more detailed discussion follows in later sections.

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*Roger Starr and James Carlson, "Pollution and Poverty: The Strategy of Cross-Commitment," The Public Interest, No. 10 (Winter 1968), pp. 103-131.

A review we conducted of most major new approaches proposed so far to bring about substantial equality of educational opportunities in higher education indicates that none of the major options now being considered would provide the resources--financial or professional--needed for a rapid and significant decrease in inequality of educational opportunities. Massive federal loans, fellowships, and grants, while desirable in their own right, will not significantly alter the existing structure--even if all given to students from disadvantaged backgrounds. (For reasons, see below.) But, shortening undergraduate training by one or two years, as we recommend, would release such resources on short order. And it would lower significantly the costs of expanded enrollment of students from disadvantaged backgrounds by shortening the period they must be supported, leaving more resources--if we assume a constant input--for sustaining quality, and above all, for compensatory education.

Such a shortening of undergraduate education has two major "catches". First, it will introduce hundreds of thousands of young people into the labor market earlier than now, an undesirable effect for reasons discussed below. This effect, however, would be reduced if the cuts in the span of formal undergraduate education are offset in part by a year of national service, a service which, we shall see, is to be recommended on its own merits.

A shorter span of undergraduate education, furthermore, may be seen as deficient as compared to four years. We shall attempt to show that the reduction of time spent in formal education will be offset in part by the educational value of the national service experience, in part by the students being more mature when they enroll in college, and partly by the improvement of teaching resulting from the greater separation of teaching from research (the third component of the suggested program). Whatever deficiencies may remain, could, for those students going on to specialized training, be corrected within the "research-universities," to emerge from the greater separation of teaching from research. To put it differently: if undergraduate education is to follow a year of national service (presently the freshman year), it will cover two years (sophomore and junior), and the senior year, for those seeking to specialize, could be picked up by the graduate and professional schools. Thus, we see how all three components complement each other.

To point out another link, which helps account for the economies resulting from cross-commitment, we focus for a moment on the relations between the introduction of a greater separation of research from teaching and an increase in the equality of opportunity in higher education. A greater separation of those institutions of higher learning that specialize in teaching from those concerned primarily with research and research-training, than is now common in this country, is called for, not only on its own merits, but also because it will help to stop the continuous upward spiraling of demands for education years, a development which is necessary if greater equality of education is to be advanced. This is so because the upward extension of the system services the privileged groups most, while broadening the base serves the underprivileged groups best. The greater separation of research from teaching is also desirable because if resources are not released to invest in sustaining the quality of teaching, the drive for equality may well be halted.

While a simultaneous commitment to the three goals will facilitate the achievement of each, it is not necessary to pursue all three goals jointly. Each does have merits of its own and can stand on its own feet.

The federal government is not expected to cover all or most of the costs of the new approaches suggested here. One of the main features of the strategy is that it first frees, and then uses resources already available in the private and state universities and colleges. Though the government role differs in the pursuit of each of the three goals, in all of them it is mainly one of research, initiative, coordination, and some financing; it never entails implementation. This seems highly desirable because of the "feudal" nature of the American system of higher education.

3. American Higher Education as a Feudal System: Highly Limited Guidability

Much of the discussion about the kind of higher education the country needs, deserves, and ought to develop, explicitly or implicitly assumes a national system, guidable from a national center. But basically the American system of higher education has no one center, or even a few central points, from which it can be guided. A realistic discussion of policy must hence take into account the fact that the system is more than decentralized--a concept which assumes some central capacity. The ultimate decision points are spread among thousands of administrations of states, cities, and boards of universities and colleges. Like feudal barons, they differ in their autonomy, power, relation to the church, and their need to take into account other barons and environmental factors. But--repeating in order to emphasize--the decision-making cells in which these forces are read and judged and, above all, responded to, are not in Washington, D.C., but scattered across the nation. And whatever decision-making power is located in Washington, D.C. is divided among congressional committees, a score or so of federal agencies which have educational programs, and bureaus within these agencies--all acting with relatively little coordination. *We recommend the establishment, in the White House, of a Council for Education*, similar in role to that of the President's Science Advisory Committee, which might facilitate the work of the inter-agency committees which exist now. A subcouncil could devote itself to dealing with higher education. While such a council would be of value, it is unlikely to alter the system drastically. The essential point which must always be taken into account is that there is no individual or group or agency that can guide, let alone direct, the American system of higher education to progress in new ways toward new goals.

He who seeks to change the American system of higher education must hence follow the channels of *influence* utilized in a *feudal* system. Instead of directing, he must set an example, demonstrate the merits and feasibility of an innovation, arrange conferences to persuade the multitude of decision-makers of the virtues of his policy and, frequently, pay for at least part of the costs of the change, or even overpay, to make it acceptable.

Next, he must take into account that while the system has no center, it does have a structure, above all, one of stratification.

Innovation often enters the system initially via the second rank. The top universities have too much to lose to risk experimenting with an innovation which may fail, and to be "faddish" is unbecoming in stodgy academia. Frequently the more driving, second ranking institutions will open up first. If the innovation "works," it is then more likely to spread upward, and--slowly, very slowly--downward.*

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*For relevant discussions see George Eastman, "Resistance to Change Within Liberal Arts Colleges: Diagnosis and Prognosis," Journal of General Education, Vol. 19 (October 1967), pp. 224-234, and Matthew B. Miles, ed., Innovation in Education (New York: Teachers College Press, Columbia University, 1964).

National policy-makers' main tools are legislation, the administrative issuing of decrees, and allocations of funds. However, legislation in the area of education tends to be particularly ineffectual as it is very difficult to enforce. Legislative attempts to desegregate schools and to penalize students who participate in campus disturbances are two cases in point. Categorical allocation of funds is somewhat more suitable because it allows some influence to be exerted without an attempt at direct control, which the system resists most. But they also have several limitations which determine what can and what cannot be done by the allocation of congressional, state or foundation funds, limitations which we seek to heed below.

a. Costs, outside funding, and innovation.--Most of the resources of a college, not unlike a nation, are committed at any one point in time. Moreover, very likely there are numerous commitments, formal or implicit, about resources which may become available, let us say, if tuition is increased in the future. If it now becomes desirable, from a national viewpoint, to change the distribution of the efforts of the college, or to alter its structure, in order, let us say, to serve more students who wish to study African history, the college may do so of its own accord if social forces within or without the college favor such a change, but these, of course, are forces national policy-makers do not control. If such forces are at work, pushing or pulling the educational system in the direction the policy-maker wishes it to go, and if he reads correctly the direction and potency of the forces, he may seek to nourish and support them. This approach is relatively easy and the way the greatest achievements are made: riding and sustaining the crests of waves history is making.

If, however, no such forces are operative, an offer by the federal government to pay for the costs of new programs or of structural changes will be, most of the time, of limited effect because the colleges will not change their preferences, although frequently they will endorse the check (and the students which must be endorsed to get it). Quite deliberately, or without seeming to be conscious of their own motivations, colleges tend to simulate an interest and to stimulate matching funds in order to gain more income but then use as little of it as possible for the purposes set by outsiders. This is one meaning of being autonomous.

If the input of funds is sizable and continuous, some genuine interest might be generated which will outlive the input, but the most important factor, it seems to us, is not the size and span of the input of funds but whether it is in line with the existing or evolving preferences of the college (evolving for other reasons than the search for more income). The notion that you can buy almost anybody to do almost anything, implicit in many inputs of funds into the college world, is not valid as a general theory of human nature, and has particularly little validity in the colleges, particularly the better ones. It follows that funding alone cannot be expected to be effective in the longer run unless what is expected by the "donor" is compatible with the existing preferences of the educators or unless these preferences can be influenced to change in the desired direction first, and by other means. _Hence, even if the federal government picks up the tab, and all of it, it is still highly desirable that the instruments of persuasion, demonstration, and influence be used, in order to gain a genuine commitment of the colleges to the new programs_.

b. The limits of resources.--A primary result of considering the costs involved in a serious attempt to remedy a social problem, such as slum housing or alcoholism, is a sharpened awareness of the need to carefully allocate the almost invariably insufficient resources. Calculations such as Mayor John Lindsay's estimate of the cost of eliminating New York City's slums (total of $100 billion), or the estimates as to what the costs of implementing the main recommendations of the Kerner Commission would be (at least $100 billion a year), have regularly far exceeded the available resources. The National Planning Association calculated that the cost of realizing the rather modest national goals set by the Eisenhower Administration would exceed the total GNP. Thus, while we would expect investment in higher education to significantly increase in the next decade--the Carnegie Commission on Higher Education has suggested that federal aid to education should increase from the present level of $3.5 billion annually to $13 billion annually by 1976*--even highly optimistic projections do not suggest that the funds necessary for the realization of the many educational goals often mentioned can be obtained.*

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*_The Chronicle of Higher Education_, December 23, 1968, p. 1.

We discuss below the desirability of a year of national service for all Americans. Many Americans already subscribe to the goal; 80 per cent of a national sample of people interviewed by the Gallup Poll in late January 1969 said that they "would favor requiring all young men to give one year of service to the nation--either in the military forces or in non-military work here or abroad, such as VISTA or the Peace Corps."* However, we expect that few are willing to pay additional taxes that would be required to gain the $16 billion a full-fledged national service system would cost. There is no direct evidence on this point as the question about national service, as far as we could ascertain, has not been asked in conjunction with a question about the costs of the program. However, support for other programs falls when costs are mentioned. For instance, when the question of costs was raised in a Harris poll that generally revealed a high level of support for the Nixon Administration's welfare proposals, the percentage of respondents that agreed fell well below the previous level and the percentage indicating uncertainty rose to the highest level of the entire interview.* We would expect such a drop in support for national service to be steeper once the annual costs were mentioned, because $16 billion is much higher than the cost of most domestic programs (which cost $2.5 billion or less) and because one tends to expect a national service not to cost much; somehow "service to the nation" is associated in our minds with "low cost".

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*See, for instance, Charles L. Schultze, "Budget Alternatives after Vietnam" in Kermit Gordon, ed., Agenda For The Nation (New York: Doubleday, 1968), pp. 13-48.

*The Washington Post, January 26, 1969.

*The Courier Journal, October 16, 1969.

Accordingly, we should briefly explain here how this estimate is arrived at. The estimate is based on a subsistence allowance of $2,400 per year, per serviceman, and $1,600 for provision of services (especially medical), supervision, administration, and training. (Charles S. Benson arrived at a similar estimate assuming a $2,400 subsistence allowance, $480 fringe benefits, $500 administrative costs, and $600 training costs. Administration costs assume one administrator at $10,000 a year for 20 servicemen).* The estimate assumes that all the members of the age cohort would serve, whose number is roughly 3,635,000 boys and girls who will reach age 19 in 1970.* Hence the 3,635,000 x $4,000 equals $14,540,000,000. However, since the cost estimates were made in 1967 but would not occur until the time the plan is implemented, the effect of inflation must be considered. This should increase the costs by at least ten per cent to approximately $16 billion ($15,994,000,000). (We shall see below that the service can be provided at a much lower cost.)

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*Charles S. Benson, "The Real Costs of National Service," National Service, Donald J. Eberly, ed. (New York: Russell Sage Foundation, 1968), pp. 15-16.

*U. S. Office of Education, Projections of Educational Statistics to 1976-1977, 1967, p. 110.

A growing segment of the citizens and legislators might be willing to cut the needed $16 billion from the defense budget. A 1969 survey of white working and middle class Americans reports that even in this group there were more who favor cutting defense expenditures (26%) than who were willing to increase them (16%).* But even they would be inclined to turn those funds to other domestic programs which seem to have a prior call on this money. Among the programs listed as most favored are job training for the unemployed, fighting pollution, fighting crime, and medical aid for the aged.* The respondents were not asked to rank "national service" but we doubt it would rank as high as any of these domestic programs.

Even if there were few limitations on the budget, there would still be limitations on professional manpower, a resource which can at best be increased slowly. Schemes for effective compensatory education--which we shall see is an essential part of the program outlined below--call for intensive psychological counseling, to support students from disadvantaged backgrounds in the tense period of transition from the slum to the campus world. But practically all the available counselors are already fully employed and several jobs await each new one as he is trained. Where will the thousands of counselors that a mass compensatory education system requires come from?

Other compensatory education programs call for very fine teaching qualities, such as great sensitivity to students from different subcultures, capacity to stimulate without "getting too close," etc., etc. But few teachers have these attributes and it is quite unclear whether they could be trained to evolve them, or where different personnel could be recruited who would have these qualities.

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*_Newsweek_, October 6, 1969.

*_Ibid_.

Successful innovations must hence be based on less costly schemes in terms of professional manpower and other resources. We shall illustrate this principle below as we outline a much less costly form of national service than the full-fledged $16 billion scheme.

It is necessary to take into account at each step that all innovations will face an environment of scarcity in the public sector, that the talk about the "affluent society," or spending on compensatory education "just as much as we do on liquor or cigarettes," or "'just' 3% instead of 2% of the GNP will do," is irresponsible in this context. We must weigh carefully where the limited national input--limited in funds, manpower, and influence--should go and use it, whenever possible, as a catalyst to mobilize other resources.

The following discussion is thus guided by a conception of a society which is changing and which higher education should help in its evolution, and by a conception of what the structure of the American system of higher education is like, and hence of the kinds of innovation which it may absorb. Frankly, we are much less sure about the specifics of the proposals which follow; those are best worked out as programs are introduced in consultation with legislatures, administrations, and, above all, with those to be affected by them. But we are quite confident about the sociological perspectives and dynamics their discussion helps to highlight. The specific schemes may be changed but not the underlying processes.

A SCHEMATIC OVERVIEW OF THE RECOMMENDED POLICY

Societal Facet	Higher Education Facet	Specific Program
Commitment to transform America to a less materialistic, more public, less unjust society	More legitimate outlets for idealism related to societal transformation in the directions defined	A year of national service
More equality of economic and social opportunities	More equality of opportunity in higher education	1. "Open" enrollment for a limited number of years 2. Quota after that, or "open" pre-enrollment 3. Intensive, prolonged compensatory education 4. Ethnic studies 5. Financial aid, by need
Research and development needs; humanization	Structural reorganization	1. More, but not all development and applied work off-campus (Research Corps) 2. Separate more the research university from the teaching college 3. Make first two years of college highly liberal art 4. Third year on, technical or pre-technical

B. National Service

The establishment of a voluntary national service is recommended, to serve as a major institutional expression of the idealism of the youth and as a significant sociological lever to make society more public, less materialistic, and more just. At the same time, as we shall see, it may serve as a major educational tool: the service should be gradually developed until it provides American boys and girls at the age of high school graduation with a set of options from which they may choose to serve their country in a manner consistent with their educational needs and the needs of the nation, without infringing on the welfare of others.* Among the options to be available are service in the Peace Corps, Vista, Job Corps (or a modified version), Teacher Corps (chiefly as teaching aides), and other nonmilitary options as well as military service in peace time.

1. The Voluntary Feature

Among the advocates of national service there is a lively debate as to whether the service ought to be voluntary or compulsory. The debate may be seen to be largely centered around three criticisms of a compulsory service: that it would be politically dangerous, morally questionable, and too expensive. An examination of these arguments suggests that while there are some reasons for opposing a voluntary service and a number of reasons for preferring a compulsory service, it seems preferable to adopt a voluntary form of service, at least initially.

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*This conception is a substantially modified version of that advanced in Donald J. Eberly, ed., National Service (New York: Russell Sage Foundation, 1968), p. 513.

It has been suggested that a compulsory national service would be a monolithic and totalitarian political structure. Referring to the adoption of "totalitarian measures" in Napoleonic France, Nazi Germany, and contemporary Israel, Robert Bird has observed that: "as a matter of record, most such measures fail to achieve their professed ends, and greater measures of control must be introduced. This is the lesser of the evils; in more cases than otherwise, the measures are subverted to ends which are frankly anti-individual."* Similarly, it has been suggested that compulsory national service would not be constrained by the "checks and balances" of the federal government.

> Grafted on to the present draft law, a single agency of government would review every citizen in the nation and make decisions about his future that might affect him for the remainder of his life. Appeal of the decision, if present practices continue, would be only to the same agency. Where in this system are the checks and balances by which citizens can defend themselves against a government hungry for power?*

Proponents of compulsory service, on the other hand, argue that the extent of compulsion could be quite limited. "Compulsion would be reduced to the single universal doctrine that the individual has an obligation of service to society. This service could be offered in many forms to suit the widest range of interests and beliefs."*

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*Robert Bird, "The Case For Voluntary Service," _ibid_., p. 499.

*_Ibid_., p. 492.

*Edward F. Hall, "The Case For Compulsory National Service," in Eberly, _op_. _cit_., p. 469.

Secondly, it has been suggested that a system of compulsory national service could be seen as morally offensive and would arouse antagonism and bitterness. Focusing upon the participants' subjective orientation, Bird has noted that compulsory national service could be viewed as a form of servitude--work to be performed under duress, willingly or not--rather than service--a task performed willingly and for no purpose other than responding to another's need. Referring to the subjective consequences of servitude, Bird inquires: "What benefit is there to a child yearning for a human relationship if the one person who is there to be a friend is there because he has to be? To whom would the hostility of being compelled be directed? . . . What kind of work can be expected in the forest lands from someone who is improving them because he would rather be there than in prison?"*

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*Bird, op. cit., p. 496.

On the other hand, while the proponents of compulsory service would very likely grant that some individuals would resent having to serve, these proponents could go on to observe that, within Bird's argument, this would be because the resentful individuals happened to perceive no other sufficient reason to perform the task, other than compulsion, and that, in general, it is not appropriate to assume that the presence of compulsion would inhibit individuals' perceptions of, and assumption of, social responsibility. Indeed it might well be argued that the existence of universal national service would facilitate the growth of such a personal sense of social responsibility.

Similarly it has been suggested that boys and girls in the more impoverished homes would have less information about, and be less motivated to participate in a voluntary national service program than would the boys and girls in other homes and that through a process of cumulative advantage the voluntary program would increase the present inequitable distribution of life chances. "The boy who is satisfactorily adjusted in a good school and a good neighborhood would be easily reached by the message of national service. The cultural enrichment, vocational benefits, and social broadening offered in national service would be within his understanding. As he stepped forward, his underprivileged contemporary would suffer a further relative deprivation."*

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*Hall, op. cit., p. 471.

Finally, it has also been suggested that compulsory service would actually expand, rather than restrict, the participants' freedom of choice, in that it would tend to provide previously unavailable experience and training, thus opening new career possibilities. There might be some difficulty in this regard due to the necessity of not undercutting the wage levels of private occupations; still it seems likely that some broadening of the individual's range of prospective occupations would occur.

Thus, overall, it appears that compulsory service is not inevitably offensive to a sense of social responsibility and that it might serve to reduce some current instances of social inequity.

Finally, the question of costs is relevant to the debate over the compulsory or voluntary nature of national service. It has been observed that a compulsory service would be more expensive than a voluntary service for three reasons. Initially, the mechanisms of compulsion (registration, processing, and punitive measures) must be paid for. Secondly, the total number of members in the service would almost certainly increase with the establishment of compulsory participation. Thirdly, a compulsory system would probably exceed a voluntary system in gathering individuals who are initially unfit to participate in any of the available service options, and who accordingly would have to receive special preparatory training.

While these observations seem valid, and in conjunction with considerations of the overall cost of national service (see below, page II-35) suggest the advisability of initiating the national service program on a voluntary basis, it should still be noted that the compulsory option does provide some benefits, in additiion to those listed above, which are not obtained with the voluntary option. Initially and fundamentally, to the extent that participation increases with the adoption of the compulsory option--and it seems reasonable to expect a quite sharp increase--the impact of the service will increase, both with regard to the services being performed by the servicemen, and, as the variety of the mix of servicemen increases, with regard to the educational impact upon the generation of Americans involved. Secondly, a compulsory service would serve better than a voluntary one to relieve the mounting public pressure for near universal provision of four years of higher education. Thus, in conclusion, while it seems preferable, due to limitations on funds, personnel, and adequate service programs, to initiate national service on a voluntary basis, a more general compulsory program is surely not an unacceptable alternative.

We favor the voluntary approach but also suggest that sociological insight shows that it is difficult to sustain a large effort on a continuous base, on strictly a voluntary basis. It is often helpful to reward--or at least to recognize--such an effort. (The Peace Corps volunteers who returned raised various demands of this sort.) Those who served a year in the national service might get "extra" points when applying for positions in the Civil Service, foreign service, admission to college, and fellowships. Other means of recognition may also be established. This is not to suggest the creation of a privileged class; the service will be only one base among others taken into account in alloting jobs, fellowships, etc. Still, the fact that it will "help" to have served a year as a volunteer, that this contribution will not go unnoticed, will help to develop the program.

2. Length of Service

Two years' service is often discussed. We favor initiation of the service for only one year, and possibly later expansion of the program. Our reasons are first, that for those who intend to continue their education, two years out of school instead of one year may make it significantly harder to return to the world of education. (The differential effect of one versus two years of educational pause is a matter which can be empirically studied. Our proposition, that two years are much more derailing than one, should be tested.)

Other reasons we favor, at least initially, a one year service period include the previously mentioned difficulty in providing meaningful projects for all participants and, as we shall see, the large costs involved.

3. The Range of Options

The criterion for including a particular form of service with the national service is societal usefulness, the advancing of values which are beyond the advancement of one's self-interest. Such societal goals as social justice (e.g., advanced by tutoring students from disadvantaged backgrounds), beautification and conservation (e.g., stream improvement), understanding among nations (e.g., Peace Corps) and community service (e.g., fund raising and committee work) obviously qualify.

The criterion for excluding a form of service is that it infringes on the rights of others. The most obvious example is the right to work and profit. If the volunteers duplicated existing functions they would be providing cheap labor or products, and this would evoke the opposition of business and labor. Leaders of both groups have already warned about this danger.

The obvious conclusion is that most of the service, if not all, would be in the public and not the private sector. There are almost no tutors for disadvantaged students now; if a mass service for them was provided, it would not deprive teachers of jobs. Beautification projects would not be carried out if the full cost of labor would have to be covered, and so on. Great caution and creativity are needed here to find non-threatening jobs. The experience of the Peace Corps, which sought to use as teachers overseas persons who did not qualify as teachers in the U.S.A., and thus raised the opposition and suspicion of teachers' associations (that these volunteers would return and serve as teachers in the U.S.A.), serves as an example of the difficulties involved.

Last but not least, the work must be meaningful. Once projects are defined as not work, not production oriented, but educational in content, there is a tendency to "make work". In Israel, for a while, high school students were flown a great distance into the desert to participate in a horticulture project in which tomatoes were grown, at great cost, in floats in water. The very high costs of these junkets and tomatoes was justified on the ground that while the project made no sense economically, it was educational. The project was stopped once it became evident that the students realized that their work had no value, and that the effect on them was anything but educational.

4. The Military Service

The relation of the national service program to military service is complex. It is best reviewed under two different sets of security environments: one in which the United States is assumed to be at war, and the other at which it is at peace, although transitional stages obviously exist.

In wartime, conscription seems necessary to recruit the number of soldiers that the government holds are needed. Attempts to mobilize sufficient volunteers during wartime would entail providing high salaries, which the disadvantaged could not resist and which would, in effect, bring disproportionate mobilization and casualties from these groups. This is already the case for re-enlistment in Vietnam. Senator M. Hatfield has reported that Army figures indicate that currently the reenlistment rate for black first-term volunteers is 25 per cent above the rate for white volunteers and the black draftees' reenlistment rate is 30 per cent higher than that of white draftees.[*] Random conscription seems the best way the burden of war can be distributed with relative fairness among classes and races.

In peace time, while a small cadre of professionals is necessary, the main body of the military could consist of enlisted men who volunteer for one, not more than two, years of service. This procedure would help to avoid the creation of a large, professional military, a potentially anti-democratic force, according to some critics of a volunteer army. It would thus be possible for individuals to join the army and experience the nature of military life without investing a significant portion of their career-decisive, early years to it. To assure that the necessary number of volunteers would be attracted, the military pay scale may have to be adjusted. This will not be nearly as expensive as in war time, because the service will not entail a danger. Professor Walter Oi, an economist and Pentagon consultant on military manpower, has been quoted by Senator Hatfield as estimating that the maintenance of a voluntary peacetime army of 2.65 million men would require inducing 75,000 enlistments above the expected rate of voluntary enlistment, and that $4 billion in salary increases would supply the necessary inducement.[*]

There may however be a degree of conflict between the attempt to attract the bulk of the military forces through attractive wages and yet

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[*] Mark O. Hatfield, "A Volunteer Army Is The Answer," The New York Times Magazine, March 30, 1969, p. 46.

[*] Ibid., p. 39.

to avoid the development of a professional army by limiting the average period of enlistment to one or two years. Also, the larger the segment of the youth who are spending a year in national service (military or otherwise), the more the fear of "losing a year" will be diminished. Thus, somewhat paradoxically, the creation of nonmilitary services may help the voluntary mobilization of recruits for military service. The same may be said about the "merit points," which will accrue for voluntary military service as they do for other services. Youth attracted to uniforms, to service overseas, graduates of military-oriented high schools (such as the Farragut Academies) can be expected particularly to choose this option over others. And if all inducement fails, some may still have to be drafted. But it seems to us reasonable to assume that a peacetime military, in the context discussed, could rely largely on volunteers much as it did between the two world wars.

5. Timing of the Service

It is recommended that the voluntary service take place following high school graduation. For those who will not go on to college this is the best time because they have not yet been initiated into career-lines and the year will round out their education by providing a "broadening experience" (see below) in other parts of the country then those they are used to, and with sociologically divergent groups. The service will also provide them with an opportunity to test their hand at an option they may later wish to pick up. For those who have not completed high school, the "drop-outs," participation may provide an opportunity to gain a less formal education and training for a job (a modified version of the Job Corps) as well as the above mentioned broadening experiences.

For those who will go on to college, service at this stage would provide a year's break between two highly structured situations. One of the major sources of alienation now is the highly routine nature of education. In part this can and should be handled by de-bureaucratization at the schools and the colleges. But this cannot be fully accomplished. For it may be that the evident dissatisfaction of many students with the extended sequence of rigid high school "grades" and college "years" derives not entirely from the nature of the educational institutions, but also from a internal psychological need associated with the individual's growth and maturation. Erik Erikson has discussed the idea of a developmental "moratorium" both as a feature of individuals' growth histories and as a distinct period in some societies' sequence of age-grades. "Societies offer, as individuals require, more or less sanctioned intermediary periods between childhood and adulthood, institutionalized psychosocial moratoria, during which a lasting pattern of "inner identity" is scheduled for relative completion."* These "moratoria" are seen as responses to the mounting pressures of the adolescent's maturation processes in which new identifications "are no longer characterized by the playfulness of childhood and the experimental zest of youth: with dire urgency they force the young individual into choices and decisions which will with increasing immediacy, lead to a more final self-definition, to irreversible role pattern, and thus to commitments 'for life.'"*

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*Erik H. Erikson, "The Problem of Ego Identity," Journal of the American Psychoanalytic Association, 4 (1956), p. 66.

*Ibid.

An institutionalized moratorium in the form of a year of national service at the point of transition from high school to college or work career would provide youth with a means of taking time to consider their desires and intentions and of accomplishing this task in a period that is largely noncompetitive but well enough defined so that it may be traversed without the awkwardness and uncertainty of "dropping out."

Additionally, a year of "rest" will help not only to relieve the tensions of high school before those of the college are faced, but also to provide an opportunity for the young person to see that some form of discipline and authority--not bureaucratic or authoritarian, and maybe limited, decentralized and responsive, but authority nevertheless--is needed. This should make him more receptive to the college, at least a modified one.

Other scheduling of the service can be considered. Possibly, one might encourage young persons to serve after college, or after two years of college (a point at which we seek to establish an institutionalized break anyhow); or, the service might be taken anytime after one reaches high school graduation age. Or, as we shall see below, it might have to be combined with the first years of college or work.

6. The Sociological Structure of National Service and Its Educational Consequences

The national service can be structured in many different ways, ways which would significantly alter the kinds, depth, and quality of the educational consequences. Under optimal conditions, the educational payoffs would match, if not exceed, those of spending one more year in an average college.

The educational effects would be maximized if the youth were removed from their homes and the region in which they have grown up and serve elsewhere, in a unit which is mixed in terms of the members' racial, class, and educational backgrounds.

A very high proportion of Americans, especially of lower class background, do not venture far from the area they were born in, especially in their formative years. Even those who go to college often attend a college within fifty miles of their home, and live at home. (In 1960 approximately 40% of the freshmen in American colleges were living at home with their parents.*) The contemporary expansion of higher education has been occurring chiefly in the area of public colleges and universities and these tax supported schools tend to restrict their enrollments to local students. This, in turn, leads to a rise in the proportion of students in the so-called commuter colleges and a decline of those in residential colleges.

Taking the youth away from their homes and regions, at least for an educational year, seems highly desirable for three main reasons. (1) Unlike the effect of the educational system in many democracies, the set of basic values communicated by American schools does not provide a firm basis for national unity. There is a superficial conformity, chiefly in the form of commitment to the same symbols (such as the flag, although in the South even it competes with a counter-symbol in the form of the Confederate flag, as the national hymn does with "Dixie"). The Bill of

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*U. S. Bureau of the Census, U. S. Census of Population, 1960 Subject Reports: School Enrollment, PC(2)-5A, Washington, D. C. 1964, p. 74.

Rights, the Constitution, and other elements of American patriotism mean fundamentally different things in different regional school systems. The affective valence of these values (as distinct from that of overt symbols) is mainly negative (e.g., anti-Communism) and even this is weakening as the Great American Solidifier.

As a direct consequence, Americans are less united, and have been less able to act as a society, especially on domestic issues (where most actions cannot be based on the anti-Communist "religion"), than most nations. There is, of course, no mechanism in the United States, as there is in Israel and France, to evolve an agreed-upon curriculum on such matters. A year of national service may do in this country what it does for the different groups of people who immigrated to Israel from diverse cultural areas such as Africa, Asia and East Europe. Admittedly the difference between a New York City middle-class child and one from the lower-class deep South, or between one from a village in Montana and one from Sunset Strip, Los Angeles, is not as great as the range of Israeli cultural diversity, but even so the American school system does significantly less for unification than the Israeli one, and hence the need for a national service may be almost as great here as in Israel. That is, the inadequacy of the school system in this regard suggests the usefulness of a post-school mechanism. (The principle applied here has been often drawn upon; as it seems impossible to significantly change the school system itself, we need to build around it, before and after, to help it fulfill its functions.)

The creation of a sociological structure which would enhance unity and provide education in depth entails removing the youngster from his home and the region in which he has grown up, (2) in order to integrate him into that independent structure. This is necessary because unless it is done, the individual's interaction at home and in the community--as well as at work and in college--will continue to be segregated by class, racial, regional and ethnic lines, within which group differences in basic values are socially cemented. We stress basic, because there is no sociological reason to try to overcome differences in subcultural values. Studies of "total institutions,"* which life in the national service would amount to, suggest that here a much greater depth of education can be attained.*

Studies of educational institutions that are seen as having unusual effectiveness have repeatedly noted the practice of isolating the trainees from their previous environment. In a review of the common characteristics of six training institutions seen as having changed "the values and attitudes of young people," LeVine observes that "isolation from sources of influence outside the school . . . is a striking feature of all the educational institutions under consideration."* Newcomb's investigation of the changes in political and economic attitudes of girls from conservative families at Bennington College, Vermont, notes the isolated location of the school as a significant contributory factor.* In a study of hospital training programs, Thorner suggests that the internalization of role expectations by both nurses and interns is facilitated by the isolated quality of life within the hospital community.* Similarly, other studies have noted the significance of the trainees' isolation in medical schools and in military officer training programs.*

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*E. Goffman, "The Characteristics of Total Institutions," Symposium on Preventive and Social Psychiatry (Washington, D. C.: Walter Reed Army Institute of Research, 1957), pp. 43-84.

*Amitai Etzioni, A Comparative Analysis of Complex Organizations (Glencoe, Ill.: The Free Press of Glencoe Inc., 1961), pp. 168-174.

*Robert A. LeVine, "American College Experience As A Socialization Process," in College Peer Groups, Theodore M. Newcomb and Everett K. Wilson, eds. (Chicago: Aldine Publishing Co., 1966), p. 115.

(3) The national service will, of necessity, mix elements of universalism (e.g., the very year of national service) with options which cannot and should not be made to be the same for everyone. There is no way to make the Job Corps training for the drop-out identical with the Peace Corps experience of the graduate of a choice high school, even if both of them would work at the same job. But much would be lost if the various services were segregated by levels of educational attainment, which correlate highly with class and race. A variety of devices should be employed, including geographic mobility (to move Southerners north and Northerners south; to

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*Theodore M. Newcomb, Personality and Social Change: Attitude Formation in a Student Community (New York: Dryden, 1943).

*I. J. Thorner, "Nursing: The Functional Significance of an Institutional Pattern," American Sociological Review, 20 (1955), pp. 531-538.

*S. M. Dornbusch, "The Military Academy As An Assimilating Institution," Social Forces, 33 (1955), pp. 316-332. See also H. S. Becker, et al., Boys in White (Chicago: University of Chicago Press, 1961), and Robert K. Merton, et al., The Student Physician (Cambridge, Mass.: Harvard University Press, 1957).

move Negroes who have grown up in a segregated environment to a nonsegregated one, and privileged kids to Appalachia: in general, to move youngsters away from their home environments), mixing people from divergent backgrounds within each service and by associating local units of divergent services (e.g., making a local division out of the units of the Job Corps, Vista, and Teacher Corps in one area). As much of the mixing experience as practical should be encouraged.

This will enrich the social experience of all those involved, a preparation most high schools do not provide for the society, at least not for the sort of integrated, informal society we envision. The national service will also do this much better than the colleges, which are an atypical slice of society. The population of college students is unrepresentative of their age group as a whole in terms of race, religion, and parental income and occupation. Less than 6 per cent of college students are black although approximately 12 per cent of the college-age population is black.* A study of Connecticut high school graduates indicated that 57 per cent of the Catholic, 63 per cent of the Protestant, and 87 per cent of the Jewish students applied for college.* Composite figures from several studies indicate that in 1960, 85 per cent of the sons of upper and upper-middle class fathers--as determined by occupational prestige--entered college, as did 60 per cent of the lower-middle class sons, 30 per cent of the upper-lower class sons and 6 per cent of the lower-lower class sons.[*]

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*Alan E. Bayer and Robert F. Boruch, The Black Student in American Colleges (American Council on Education Research Reports, Vol. IV No. 2; Washington, D. C.: American Council on Education, 1969), p. 1.

*Robert J. Havighurst and Bernice L. Neugarten, Society and Education, 2d. ed. (Boston: Allyn and Bacon Inc., 1962), p. 250.

Even if greater representativeness is achieved in the student population, through measures which are recommended below, it seems likely that the current pattern of geographic parochialism (as previously noted, the 1960 census indicates that 40% of all American freshmen live with their parents), segregation among institutions (one half of the Negro students are currently attending black colleges),[*] and informal segregation within colleges (along racial, ethnic, and class lines), would remain much the same and would limit the amount of social mixing actually occurring in colleges.

It is also important that the "mixing" in the national service will occur in an environment in which the white middle class will be less favored than when the mixing occurs, to the degree that it does, in college classes. In military training, working on a farm, or on conservation projects, a person from a disadvantaged background is more likely to feel at home, and be able to make a more substantial contribution, than in an academic setting. We are, of course, not saying that such contributions are not to be made on the campus. Here, too, disadvantaged students may give the others a more realistic sense of society, a richer and more pluralistic cultural experience. Still, mixing in the college can often be rather superficial. Students can attend the same lecture course for a year without getting to know each other well. This can also happen in an army unit or a Peace Corps team but the totality and intensity of the experience make it much more likely that the experience will be a deep and transforming one, and of the kind which will help disadvantaged servicemen to overcome at least a part of their "hang-ups" and the servicemen from privileged backgrounds to overcome part of their prejudices. We hold, therefore, that since feelings of inferiority and inadequacy are a major problem which hold back disadvantaged persons on the campus, it would be advantageous from this important viewpoint if the inter-class, inter-race, inter-regional mixing occurred in the national service.

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[*] _Ibid_., p. 252.

[*] A. E. Bayer and R. F. Boruch, _loc. cit_.

The inclusion of girls is also important even though this will approximately double the cost of national service, because the exclusion of girls would to a considerable degree diffuse the hoped for educational benefits of the service by fostering an artificial, military like, social atmosphere of male-only service organizations. And the inclusion of girls assures that as the boys marry, their wives will share their new perspectives. It is more likely, then, that the next generation of Americans, whose moral education and character formation is largely and increasingly entrusted to the hands of mothers and female primary school teachers, will be a more realistic and open one.

7. The Costs of the Programs and Sources of Finances

The costs of a full-fledged service, one for all those who reach age 19, would run about $16 billion for reasons discussed above, if the service would be implemented in 1970. It is hard to believe that such sums will be available in the forseeable future, however commendable the idea of a national service. And, dealing with 3.6 million youth a year would be an almost unmanageable task if we are to create a meaningful experience for them.

For various reasons, spelled out immediately, it is thought possible to initiate a program, without incurring such large costs. First, some sort of medical fitness test will be necessary and this would reduce the number of servicemen by about 11 per cent if all the age cohort were to volunteer (or if the service would be mandatory). We have, of course, no knowledge of the rejection rate of a national service, but there is data on the army rejection rates. Based on these, it was calculated that 1/18th of an age group would be physically unfit for any kind of national service (as opposed to 1/6th unfit for military duty) and another 1/18th would be mentally unqualified for military duty even under emergency conditions, and thus also for national service. Accordingly 1/9 or 11 per cent of the cohort of nineteen year olds may be expected to be either physically or mentally unable to participate in a national service year. Thus, the cost would be not $16 billions, but $14,240,000,000.

Various other limitations could also be imposed: e.g., married couples could be excluded as a pressure against premature marriage and because such couples would complicate the service facilities and increase its costs. The proportion of males who are married between 14 and 19 years of age is 2.5 per cent and that of married females is 10 per cent.* If this rule is followed, the costs would be down to $12,139,155,000. (We reached this figure by taking 10 per cent out of the female age cohort and 2.5 per cent of the boys at age 19, and then deducting 11 per cent, on the assumption that medical and mental deficiencies are at least as common among the nonmarried as the married.)

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*U. S. Bureau of the Census, Statistical Abstract of the United States: 1968, p. 32.

Military service, also, may be expected to take a sizable portion of the 19 year old boys. While there is a good deal of discussion about the method by which the military service's manpower needs are to be filled, and the size of the military forces in peace time, there is little dispute about the military's need for a portion of the available manpower. The segment of the age cohort which would be drafted depends on many considerations such as the international situation, the method of the draft, the ratio of draft deferments over persons drafted when they reach age 19 and so on. It is beyond our study to explore these. We shall assume, hence, on the basis of an existing analysis,* and some conjectures, that if 30 per cent of the 19 year old men would be drafted, the costs would be down to $10,217,956,200.*

Possibly one might be allowed to charge against various other budgets those costs which the national service would incur because it takes over duties of other agencies or social units. First, about a fifth of the age cohort are likely to be drawn from the poor lower classes;

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*Eberly, _op_. _cit_., p. 529.

*We reached this figure by taking 30 per cent of the group of 19 year old boys remaining after the married and unfit were dropped from the total and subtracting the cost of their participation in national service from the cost estimate based on unmarried healthy 19 year old boys and girls.

approximately one quarter of these, or 5 per cent of the total cohort, may be receiving public assistance in the form of welfare or job training.*

Accordingly, recognizing that estimates in this area are quite arbitrary and must be taken tentatively, it may be possible to charge 5 per cent of the costs of national service against the budgets of OEO, the Department of Labor, the welfare wing of HEW, and state and local public assistance agencies.

When we say "charged against" this may take several forms: (1) a mental process, in which we point out to legislatures and the press, that the national service either takes over other agencies' duties and hence they either need less funds or can carry more missions; (2) actual transfer of program and funds, e.g., the Job Corps, Teacher Corps from Labor, OEO, etc., to the national service; (3) the carrying of some units of the national service by other agencies or social units and/or their budget, which is obviously going to be the case for those who volunteer for military service.

Secondly, the higher education system could absorb, in several ways, part of the costs of national service. Such colleges as already have an alternating work-study program, such as Antioch, or which might be inclined to initiate such a program along with the establishment of national service, might also jointly carry part of the service program and its costs (particularly administrative ones). Additionally, students attending college on a fellowship financed by taxpayer's money (through federal grants or by means of free tuition in state and city universities) and even from private sources (which receive tax deductions for such contributions) could be required to either give time to tutor students in disadvantaged neighborhoods, or to aid in the administrative branches of the national service.

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*David Matza, "Poverty and Disrepute," Contemporary Social Problems, Robert K. Merton and Robert A. Nisbet, eds. (New York: Harcourt, Brace and World, Inc., 1966), pp. 623 and 626.

Actually, we suggest that the proposition that a student who gains a fellowship, or an interest free loan, owes "something" to the society in return is so valid, both morally and financially, that we favor setting up nationwide requirements for service, say four hours tutoring per week of someone on or off the campus, even if no national service will be formed. Thus, with some assistance from all students receiving public support for their education, and also some support from colleges operating alternating work-study programs, a small further reduction in the costs of national service could be achieved. Thus if the national service received support from colleges, publicly supported college students to the extent of 2 per cent, and from public welfare agencies to the extent of 5 per cent, its costs would be down to $9,502,699,266.

It should be noted that the above figure is for a full national service in which every boy and girl in the age cohort who is qualified participates for a year. If, on the other hand, the national service program operated on a voluntary basis--an arrangement which would very likely be necessary even if full funding were available, due to personnel limitations and the considerable time needed to develop meaningful service programs that do not undercut private wage scales--then participation and costs would be expected to be considerably lower. Thus, assuming that only 500,000 boys and girls volunteered to participate, the costs of the program would be $2.2 billion annually.

Finally, the advocates of national service wish to start with a small experimental program. On April 22, 1969, Senator Mark Hatfield introduced a bill in the Senate to establish a National Youth Service Foundation and a National Youth Service Council. The bill was also sponsored by Senators Mathias, Percy, and Saxbe. If established, the foundation would be empowered to "make grants to or to contract with public or private nonprofit agencies for recruitment and training of 17 to 27 year olds, for periods up to 2 years."* For this purpose $75 million was requested for the first fiscal year, $300 million for the second, and $600 million for the third year. The Foundation itself would also be empowered to recruit, train, and utilize 17 to 27 year olds in service and learning programs. For these and related activities $75 million was requested for the first fiscal year, $200 million for the second year, and $300 million for the third year.

8. The Scope of Participation: A Permanent Rise in Commitment to Societal Causes and Projects?

A key issue, which underlies the preceding disucssion, is the extent of idealism of the young generation. If it is small, shallow and transitory, there will be few volunteers for the national service; the costs of the program would be lower, and the results meager, as the nation-building and integration effects and education pay-offs would also be small.

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*U. S. Congressional Record, 91st Congress, 1st Session, 1969, 115, No. 64, p. 3987.

However, if the idealism is pervasive, growing, deep and likely to continue, a more costly but also much more effective program is called for. And, if such idealism is ignored, it is likely to seek uninstitutionalized, and occasionally illegitimate outlets. If those developments are encompassing enough, they may strain severely the societal fabric. We devote the next pages to trying to assess the scope and nature of the new idealism.

As far as one can judge from existing data, the more educated and well-off groups (groups which are both growing) of the youth, as well as a growing number of members of minorities, have a strong commitment to service causes other than their narrow self-interest. The new orientation may be illustrated by the words of Garrett Lambrev, a student at Stanford University, in April, 1965: "People ask me what I am going to do when the civil rights cause runs out. I tell them it is not just a cause we arbitrarily picked out just to do something. It is a feeling about humanity--any color, anywhere. And that won't change."*

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*Life, April 30, 1965, pp. 30-31.

Recent surveys provide evidence as to the extent and diffusion within the student body of values oriented toward service to society and away from individualistic motivations. A Gallup Poll of a sample of all college students in May, 1969, concludes:

> A majority of all students (51 per cent) say they have done social work. The percentage is 58 per cent among women and 47 per cent among men. A higher proportion of denominational college students (60 per cent) than private college students (52 per cent) and students in state-supported colleges (50 per cent) have engaged in this type of service. Evidence that demonstrators are willing to

> do more to try to change society than march and carry placards is seen in the fact that 65 per cent of this group have done social work as opposed to 45 per cent among nondemonstrators.*

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*The Washington Post, May 16, 1969; p. All.

The same Gallup Poll reports with regard to the question of career orientation that:

> The traditional goals of earning a great deal of money and making one's mark in the world have lost some of their charm. An extraordinarily high proportion of students today want to go into the "helping" professions, notably teaching. Asked what occupation they expected to be in at age 40, 29 per cent list teaching.*

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*The New York Times, Monday, May 26, 1969.

The full tabulation of responses is as follows:

TABLE 11-1

OCCUPATION EXPECTED AT AGE 40*

	Per cent
Teaching	29
Business, management	8
Housewife	8
Law	5
Clergy	5
Engineering	4
Social work	4
Medicine	2
Others	24
Don't Know	11

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*The Washington Post, *op. cit.*

On the face of it, the Gallup Poll may be a little hasty in reaching the conclusion that "The traditional goals . . . have lost some of their charm," as quoted above, since it has not supplied a basis for comparison with previous times. Fortune magazine has recently attempted to identify trends with regard to this and other questions. Its strategy consisted in subdividing its college-sample in terms of "practical minded" students and "forerunner" students. The label of the latter arises from Fortune's evidence that suggests they represent those whose " . . . attitude toward college and society will become more prevalent in the years ahead."*

The former group consisted of those who chose the first of the following responses as most representative of their views about college and careers; the latter group chose the second response.

1. For me, college is mainly a practical matter. With a college education, I can earn more money, have a more interesting career, and enjoy a better position in society.
2. I'm not really concerned with the practical benefits of college. I suppose I take them for granted. College for me means something more intangible, perhaps the opportunity to change things rather than make out well within the existing system.

A follow-up survey, conducted 6 months later, provides an opportunity to subject the proposition to a test. It was reported that:

> Evidence that their ideas are spreading to other groups emerges from the answers to similar questions in the fall and spring surveys. For instance, the percentage of college youth who feels that resistance to the draft is justified grew from 51 to 55 per cent and among non-college youth the percentage grew more sharply, from 17 to 28 per cent. Even among practical-minded college students--those who are mostly conservatives and moderates--there is less support for war as an instrument of national policy. For example, the proportion of such students who said they supported

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*Fortune, January 1969, p. 70.

> war as a way of "protecting our national interests" dropped from 65 per cent to 51 per cent. Similarly there is somewhat less zeal for law and order than there was last fall. The proportion of practical-minded students who said they would welcome more law and order declined from 78 per cent to 68 per cent, and among noncollege youths the percentage slipped from 91 per cent to a still significant 81 per cent. There is also less willingness to accept laws that young people do not like. The percentage of college students who said they could easily accept the restraints of such laws fell sharply, from 29 per cent to 15 per cent, and among noncollege youths the drop was from 43 per cent to 34 per cent.*

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*Fortune, June 1969, p. 73.

In view of this evidence, we may accept the proposition that "forerunners" are setting up new patterns, and orientations, and will increase in number as time goes on. They represent 42 per cent of the original sample of students, so that even on their own they are a substantial group which national programs for societal action may draw upon. Let us now turn to the question of trends in career plans.

We see here that data reported by Gallup, shown in Table 1., does not hold constant for all groups within the universities, nor, of course, for noncollege youth. Gallup reports 29 per cent of all college students as expecting to "teach"; in the Fortune data presented in Table 2 this is shown to vary from 23 percent for the "practical minded" to 39 per cent for the "forerunners". The difference become even greater when dealing with a "business" career: here the datum given by Gallup holds true only for the "forerunners" (8%). If the "forerunners" are really what they are indicated to be, then we can expect greater movement in the direction of the "service careers. Even if this trend does not materialize, we still have a sizable number who already follow this pattern. Suggesting the permanence of this situation is the fact that already three years ago

TABLE II-2

CAREER PLANS OF YOUTH AND STUDENTS*

To which of these kinds of work (if any) are you predisposed?

	No College	Practical	Forerunner
Business administration, marketing, merchandising, sales	12	27	8
Teaching	-	23	39
College	-	5	14
Elementary or high school	-	18	25
Engineering	5	14	3
Medicine	1	9	3
The helping professions (social work, psychology, etc.)	2	5	13
The arts (music, art, writing, etc.)	3	5	12
Science	3	5	5
Law	1	3	9
Accounting	1	3	2
Government	3	3	4

*Fortune, June 1969, p. 181.

surveys found that business was losing out to service careers within the student community. On the basis of the results of a survey conducted by Harris, Newsweek* concluded: " . . . the prevailing campus climate writes off business in general as an unexciting rut." In general, " . . . 31 per cent of the students were considering a career in business; only 12 per cent made it their first choice." Even more significant is the trend reported by a Georgia Tech official: "Five years ago our graduating classes went into industry 'lock, stock and barrel.' Last year, a full 40 per cent of the graduates stayed in school or took nonbusiness jobs." The evaluation of different careers by students came out most succinctly in the following table, based on the same survey*

TABLE 11-3

BUSINESS VS. OTHER CAREERS: EVALUATIONS
(In Percentages)

	Business	Other Career
Financially rewarding	60	12
Competitive	50	15
Challenging	20	51
Creative	11	39
Intellectually stimulating	7	57
Chance to help others	1	42

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*Newsweek, May 2, 1966, p. 85.

*Ibid., p. 88.

Newsweek offers the following interpretation of the data: "In rating business as a career, many college seniors believe its principal attractions are money and the opportunity for up-the-ladder advancement. But the professions and other careers, they feel, offer much more in the way of personal fulfillment."*

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*Ibid., p. 88.

Harris reports that "activation" of the students, along several dimensions, is on the increase. Thus,

> Among college seniors who graduated in 1967, 1968, and 1969, comparable cross sections were asked: 'How do you feel about those individuals who are refusing to go into the armed forces when drafted, because of their opposition to the war in Vietnam? Do you respect them more or less because of the stand they are taking?

TABLE II-4

RESPECT FOR DRAFT RESISTERS*
(In Percentages)

	1969	1968
Respect them more	48	29
Respect them less	34	50
No difference	12	13
Not sure	6	8

*The Harris Survey, in The Scranton Tribune, Monday, June 30, 1969.

Evidence that activation is not limited to antiwar activities is provided by the tabulation of the responses to the question:

> Generally, do you feel that protests in this country by students, Negroes, and antiwar demonstrators will lead to positive changes and should be continued, do you feel the protests have been worthwhile but have gone too far and should be stopped, or do you feel that the protests should never have started in the first place?

TABLE II-5

COMMITMENT TO PROTEST*
(In Percentages)

	Total Students
Will lead to changes, should be continued	51
Worthwhile, but gone too far	36
Never should have been started	7
Not sure	6

*Ibid.

Finally, in the words of Louis Harris, "The survey also reveals that the potential for student 'activism' has not begun to be tapped. It is likely to accelerate rather than decline." In eight key activity areas, here is the degree of participation recorded this past year and student willingness to take part in such protest demonstrations:

TABLE II-6

STUDENT ACTIVISM POTENTIAL*
(In Percentages)

	Have Done	Would be Willing
Sign a petition	84	97
Participate in a demonstration	40	72
Defy school authorities	23	47
Join a picket line	18	59
Violate the law	18	34
Participate in civil disobedience	11	36
Risk a future security clearance	9	37
Go to jail	4	38

*Ibid.

Thus, if either societal or educational conditions alienate important segments of the youth and if insufficient channels (either in number or in variety) for institutional expression of idealism are offered, increasing numbers of the young will turn to protest, radicalism and even violence. If the war is terminated, and high schools and colleges reformed, the time will be right to channel this idealism into a constructive outlet: national service.

APPENDIX II-A

Out-of-State Undergraduate College Tuition Charges and Interstate Student Migration

One of the major benefits of the national service is that it brings together youths of different races, economic backgrounds, and geographic regions. To a certain degree, the movement of students across state lines to attend colleges produces a similar effect.

However, rapid increases in college tuition for students from out-of-state could seemingly affect this interstate migration.

No studies dealing directly with the relation of out-of-state tuition charges to interstate student migration seem to be available. The material discussed here consists largely of data published by the U. S. Office of Education and by private educational organizations. The data indicate that while out-of-state undergraduate tuition charges have risen faster then in-state charges during the last decade, national rates of student migration have remained relatively stable, although the absolute numbers involved have increased. Both this finding and some of the variations among states in tuition charges and out-of-state student registrations may suggest that increasing competition for enrollment in American colleges is counteracting the influence of higher out-of-state fees. While the data presented are open to such an interpretation, they do not necessarily require or demonstrate it.

1. Rising Out-Of-State Tuitions

While a gap has long existed between college tuition for in-state and out-of-state students, data assembled by the American Council on Education suggest that a noticeable widening of this tuition differential had not occurred until recently. Out-of-state tuition averaged 67 per cent more than in-state tuition in 1928 and increased to an average 135 per cent more than in-state tuition in 1964.* However, an examination of the timing and pace of the average differential's expansion reveals essential stability (and even some decrease) from 1928 until 1955, followed then by a steady widening of the average differential tuition requirement. This pattern may be traced in the two attached ACE charts where the percentages for in-state tuition first advance from 1927-28 to the base year of 1955-56 more rapidly than do the out-of-state percentages and subsequently fall behind the percentage increase in out-of-state tuition.*

2. Long Term Trends in the National Percentage of Out-of-State Students

It seems likely that the information reviewed above might imply the occurrence of a post-1955 interruption of an established trend in student migration, resulting from the widening gap between in-state and out-

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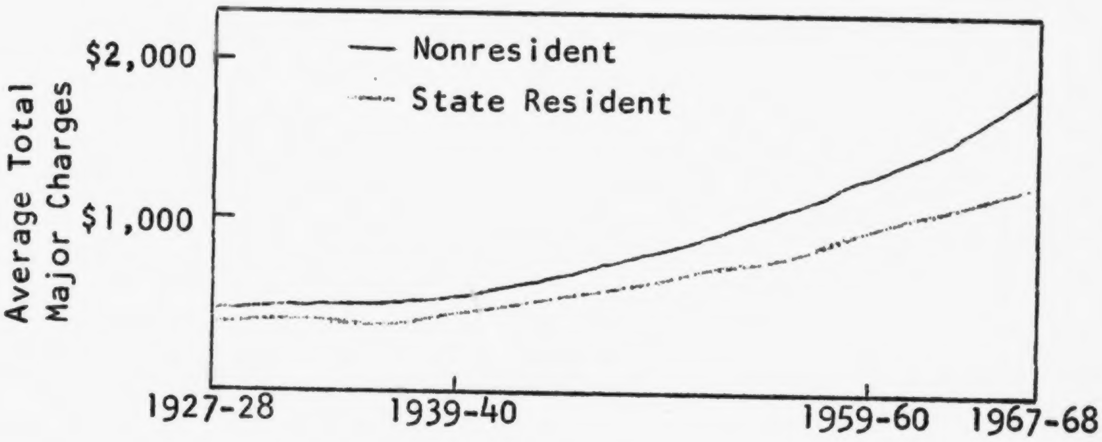
*Christopher Jencks and David Riesman, The Academic Revolution (New York: Doubleday and Co., 1968), p. 169.

*The same pattern has been noted by M. M. Chambers: 'Within the past decade there has occurred a wave of hysteria demanding that fees for "out-of-state" students be raised again and again, so that in almost all states they are now nearly or fully double the fees for "in-state" students." M. M. Chambers, Higher Education: Who Pays? Who Gains? (Danville, Illinois: Interstate Printers and Publishers Inc., 1968), p. 110.

Trends in
AVERAGE CHARGES
to
Undergraduate Students
at
20 LARGE PUBLIC UNIVERSITIES,
Selected Years,
1927/28-1967/68



Year	Tuition and Fees*		Room and Board	Total Major Charges**	
	Resident	Nonresident		Resident	Nonresident
1927-28	$ 77	$ 131	$ 328	$ 405	$ 459
1931-32	90	166	344	434	510
1935-36	101	200	307	408	507
1939-40	106	210	355	461	565
1947-48	130	302	495	625	797
1951-52	145	366	585	730	951
1955-56***	181	436	640	821	1,076
1959-60	248	574	742	990	1,316
1963-64	290	699	812	1,102	1,511
1967-68	363	943	886	1,249	1,829
INDEXES (Base Year: 1955-56)					
1927-28	43	30	51	49	43
1931-32	50	38	54	53	47
1935-36	56	46	48	50	47
1939-40	59	48	55	56	53
1947-48	72	69	77	76	74
1951-52	80	84	91	89	88
1955-56	100	100	100	100	100
1959-60	137	132	116	121	122
1963-64	160	160	127	134	140
1967-68	201	216	138	152	170

Note: In interpreting, place emphasis on trends rather than exact cost. Variability in reporting among institutions and over the years has been reduced but not eliminated by institution-by-institution analysis. Data are from 20 public universities for which usable figures were available throughout the period. In 1958, each institution awarded over 1,400 bachelor's degrees; in 1966, over 1,700.

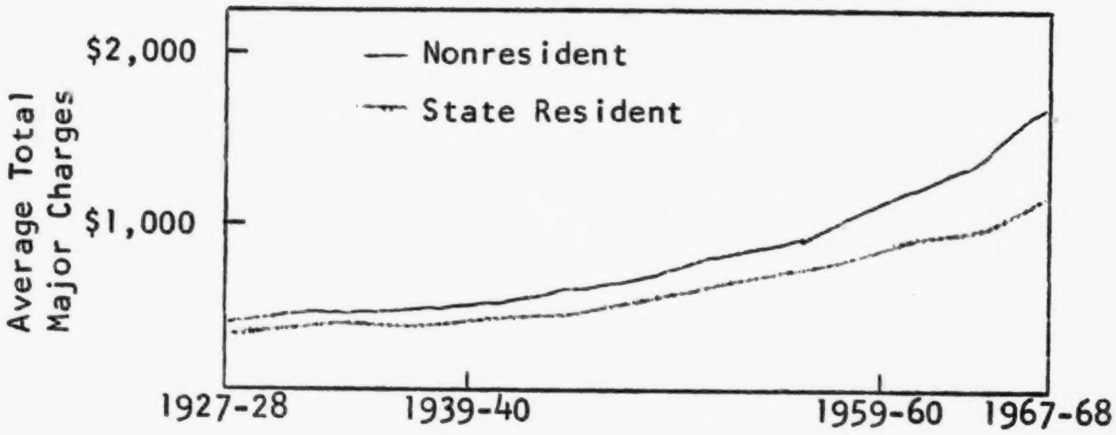
*Tuition and fees include tuition and related listed fees generally paid by all undergraduate students. Excluded are fees not required of all students, one time fees, books, supplies, returnable deposits, and personal expenses.

**Total major costs are a total of tuition and fees plus room and board.

***Base year for index.

Source: Compiled from American Universities and Colleges, First through Ninth Editions (Washington: American Council on Education, quadrennially, 1928-1964); prepublished data from the 10th edition, 1968; college catalogs when needed for clarification.

Trends in
AVERAGE CHARGES
to
Undergraduate Students
at
12 PUBLIC INSTITUTIONS,
Selected Years,
1927/28-1967/68



Year	Tuition and Fees*		Room and Board	Total Major Charges**	
	Resident	Nonresident		Resident	Nonresident
1927-28	$ 86	$ 123	$ 280	$ 366	$ 403
1931-32	105	152	295	400	447
1935-36	116	170	270	385	440
1939-40	129	201	277	406	478
1947-48	157	267	382	539	650
1951-52	183	319	472	655	791
1955-56***	202	388	520	722	908
1959-60	247	545	598	846	1,143
1963-64	307	688	654	960	1,341
1967-68	406	994	754	1,160	1,748
INDEXES (Base Year: 1955-56)					
1927-28	43	32	54	51	44
1931-32	52	39	57	55	49
1935-36	57	44	52	53	48
1939-40	64	52	53	56	53
1947-48	78	69	73	75	72
1951-52	91	82	91	91	87
1955-56	100	100	100	100	100
1959-60	122	140	115	117	126
1963-64	152	177	126	133	148
1967-68	201	256	145	161	193

Note: In interpreting, place emphasis on trends rather than exact cost. Variability in reporting among institutions and over the years has been reduced but not eliminated by institution-by-institution analysis. Data are from 12 public colleges and universities for which usable figures were available throughout the period. Each institution awarded no more than 1,250 bachelors degrees in 1966.

*Tuition and fees include tuition and related listed fees generally paid by all undergraduate students. Excluded are fees not required of all students, one time fees, books, supplies, returnable deposits, and personal expenses.

**Total major costs are a total of tuition and fees plus room and board.

***Base year for index.

Source: Compiled from American Universities and Colleges, First through Ninth Editions (Washington: American Council on Education, quadrennially, 1928-1964); prepublished data from the 10th edition, 1968; college catalogs when needed for clarification.

of-state tuitions. However, while the following material does suggest some persisting characteristics of student migration, it does not suggest a clear enough departure from these characteristics after 1955 to require the introduction of a special explanation.

Discussions of possible long term trends in the national proportion of out-of-state undergraduate students generally center around a series of surveys conducted by the U. S. Office of Education (1938-39, 1949-50, and Fall 1963) and data on out-of-state registration in Fall, 1958, compiled by the American Association of Collegiate Registrars and Admissions Officers. (Two sources specifically compare these sequential studies: the A.A.C.R.A.O.'s summary of its 1958 study compares that study with the O.E.'s 1949-50 survey,* and the ACE's Fact Book on Higher Education in turn compares the A.A.C.R.A.O.'s 1958 study with OE's Fall 1963 report.)* Comparisons of these studies encounter a number of problems and several overtly conflicting interpretations have been offered. But, these matters are overshadowed by the fact that the range of discrepancy in the long term (10-30 year) national trend in student migration is much more limited (± 2%) than the range of variation observed between states (± 7%) in a five year span (1958-1963). This would suggest an adequate degree of agreement on the long term characteristics of student migration, in view of the fact that student tuitions nearly doubled in the same period of time.

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*American Association of Collegiate Registrars and Admissions Officers, A Supplement to Home State and Migration of American College Students Fall 1958 (A.A.C.R.A.O., December 1959), p. 36.

*American Council on Education, A Fact Book on Higher Education (Washington, D. C.: annual supplements), pp. 8164-8167.

The broadest perspective on trends in student migration is provided by the observation in C. Jencks and D. Riesman's The Academic Revolution. They report in the twenty-nine years from 1934 to 1963 the percentage of out-of-state students at public institutions rose from 9 per cent to 11 percent--an increase of 2 per cent occurring over nearly 30 years.* The A.A.C.R.A.O. analysis of the 1949-1958 data and the ACE analysis of the 1958-1963 data differ from the Jencks-Riesman analysis because they focus on the percentage of undergraduates migrating out of a state to attend college and deal with shorter periods of time. Nevertheless, the limited magnitude (if not the direction) of change in student migration that they report is much the same.

Specifically, the A.A.C.R.A.O.'s comparison of its own Fall 1958 survey of student migration with OE's 1949 survey suggests a nine year decrease in proportional out-migration of approximately 1.4 per cent.* The two surveys utilized somewhat different data collection techniques and most of the variations (such as the inclusion of highly-migrant professional school students in the 1949 but not the 1958 data) seem likely to have inflated the 1949 migration rate, increasing the observed differential in migration rates.*

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*Jencks and Riesman, p. 169.

*A Supplement to Home State and Migration, p. 36.

*See Supplement to Home State and Migration of American College Students, Fall 1968, A.A.C.R.A.O., p. 34, for a listing of the differences in techniques. Thus the A.A.C.R.A.O. analysis suggests a nine year decrease in student out-migration rates of 1.4 per cent or less.

The ACE's comparison of the 1958 A.A.C.R.A.O. study and the 1963 OE study suggest that the national proportion of undergraduates leaving their home state for college remained essentially stable over the period. Although 31 states indicated a falling rate of out-migration compared to 20 reporting a rising rate, the increases that did occur were large enough to redress this apparent imbalance, and even produced a very slight increase in the average rate of out-migration. Finally, the ACE Fact Book notes that "the national percentage for undergraduate students attending college out-of-state was 17 per cent in both 1958 and 1963."*

Thus, while the exact figures cited above as indications of changing rates of student migration are probably individually of limited validity (as they may be small enough to fall within the range of error generated by the study techniques), their consistently limited magnitude of suggested change, particularly compared with the magnitudes of interstate variations in student migration, does suggest a fairly stable long term rate of student migration.

However, it would be possible to argue that since many factors suggest the probability of increased student migration (e.g., greater affluence, improved means of national transportation, increased numbers of college applicants), the suggested stability of student migration rates is a phenomenon requiring explanation, possibly in terms of increased out-of-state tuition rates.

It should also be noted that the methods of computing "national averages" utilized above were very crude (e.g., averaging nine rounded regional averages to obtain a national average) and that more cautious analysis of less summarized data might produce more persuasive indications of a post-1955 alteration in student migration rates.

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*A Fact Book, p. 8165.

3. Interstate Variations In Out-Of-State Tuition and Student Migration

In an effort to extend the examination of the possible relationship between student migration and out-of-state tuition charges to the state level, 50 states and Washington, D. C. were categorized according to whether their reported rate of student in-migration increased or decreased by 3 per cent or more between 1958 and 1963, and according to whether their out-of-state tuition differential increased or decreased.

Of the 14 states categorized as exhibiting rising rates of in-migration, 3 were eliminated because of difficulties in survey comparability, and 11 states were retained for further analysis. Similarly, of the 6 states exhibiting falling rates of in-migration, 5 were examined further. Most of the 31 states characterized by relatively stable rates of in-migration were eliminated because of the limited time for analysis. Eight states were selected for further analysis on the basis of the presence of a major state university. The resident and nonresident tuition charges for 1961-62 and 1963-64 for one or more public universities within each selected state were collected,* and each state was categorized according to whether its university's resident-nonresident tuition differential increased more than $100.00 from 1961-62 to 1963-64.

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*U. S. Office of Education, Higher Education Basic Student Charges, Circular 685 1961 62, Circular 755 1963-64.

The states were then cross-classified according to whether out-of-state tuition rose or remained stable and according to whether in-migration rose, fell, or remained stable. The results are presented below:

Tuition up:

- Migration up: 5 New Hampshire, Georgia, Kentucky, South Carolina West Virginia
- Migration stable: 3 Michigan, Ohio, Wisconsin
- Migration down: 2 Colorado, Nevada

Tuition stable:

- Migration up: 6 Iowa, Missouri, Nebraska, New Mexico, North Carolina Wyoming
- Migration stable: 5 Arkansas, Illinois, Minnesota, Texas, Washington
- Migration down: 3 Connecticut, Florida, Virginia

Migration up:

- Tuition up: 5 New Hampshire, Georgia, Kentucky, South Carolina, West Virginia
- Tuition stable: 6 Iowa, Missouri, Nebraska, New Mexico, North Carolina Wyoming

Migration stable:

- Tuition up: 3 Michigan, Ohio, Wisconsin
- Tuition stable: 5 Arkansas, Illinois, Minnesota, Texas, Washington

Migration down:

- Tuition up: 2 Colorado, Nevada
- Tuition stable: 3 Connecticut, Florida, Virginia

Before considering the possible implications of the cross-classification, the limitations in the methodology should be reviewed. As a result of the difficulty in obtaining accumulated institutional tuition data before 1961-62, the first indication of the postulated causal variable (rising out-of-state tuition) is drawn from a point in time subsequent to the first indication of the dependent variable (changing migration rates). Thus, the instrument is only valid for quite crude readings. There is also a disjunction between the student migration data, which are based upon all undergraduates in all colleges in the state, and the tuition data which are drawn from selected public universities. However, the public universities may be expected to be the primary locus of differential tuition charges.

Finally, there is a possible confounding factor in the analysis: the changing rate of internal, local registration becomes confounded with the measurement of in-flow. However, an examination of the consequences of these analytic alterations suggests that their elimination would not noticeably affect the relationship between out-of-state tuition and student migration.

Initially, the cross-classifications do not suggest any simple or direct influence of out-of-state tuition changes on rates of undergraduate in-migration. Both under conditions of rising out-of-state tuition differential and under conditions of a stable differential, more states exhibit rising rates of in-migration than exhibit stable rates of migration. At this rather broad level of analysis, out-of-state tuition changes do not seem related to rates of student migration.

However, a slightly more complicated interpretation of the observed distribution is possible. With increasing national competition for places in college, the better-known state universities may have maintained their previously established rates of in-migration (by local political restrictions such as quotas and elevated admission standards)* whether their rates of out-of-state tuition were disproportionately raised (Michigan, Ohio, Wisconsin) or not (Illinois, Minnesota, Texas, Washington). At the same time, previously-local southern and western universities may have experienced a disproportionate increase in student in-migration. Further, it may be noted that among the states experiencing rising rates of in-migration, the western states (Wyoming, New Mexico, Nebraska) generally maintained their previous level of out-of-state tuition differentials while the southern states (Georgia, South Carolina, Kentucky) more often increased it. If the southern schools are viewed as being more established and prestigious than the western schools, then their tuition increases may be related to their better competitive position. Whether or not this particular interpretation is satisfactory, it seems possible that analysis on this level (involving a state's national academic prestige, local student body growth, and internal political forces reflected in tuition rates) would help to explicate the possible relationships between out-of-state tuition and interstate student migration rates.

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*"Many big public universities have in recent years been raising their admissions requirements for out-of-staters, arguing that there are insufficient places for all the local students who apply. Others have established quotas for out-of-state students." Jencks and Riesman, pp. 170-71.

Thus, on one hand, the material reviewed above has produced no obvious indication of out-of-state tuition changes influencing student migration levels; the national percentage of student migration appears to be largely stable despite rising out-of-state tuitions, and interstate comparisons reveal no direct link between the two variables. Yet on the other hand, interpretations are available, if not yet persuasively demonstrated, that point to a relationship between out-of-state tuition levels and student migration; the continuing stability in national student migration rates, despite rising out-of-state tuitions, may be the outcome of increased competition for admission to American colleges, and some of the interstate relationships observed in the cross-classification presented above may reflect a link between a state university's national prestige or competitive position, its out-of-state tuition rates, and perhaps student migration into the state.

Thus, an initial examination of the relationship between rising out-of-state tuition charges and rates of student migration has produced mixed results: while no direct relationship between the two variables has been demonstrable at the present level of analysis several more elaborate interpretations, which might confirm such a relationship, have been suggested.

III. EQUALITY AND QUALITY IN LIBERAL ARTS AND TECHNICAL UNDERGRADUATE EDUCATION

We now seek to explore the relationships among the following attributes of the American system of higher education: (1) selectivity; (2) standards; (3) balance between technical and liberal arts education; and (4) the organizational structure of colleges and universities. Specifically, we ask under what conditions can the criteria of admission to colleges be changed to advance equality of opportunity in higher education with as little loss in quality of education as possible. This raises two secondary questions: How many years of college education should be available "for all"? And how much of it should be liberal arts and how much technical education?

A. Liberating Education as a Distributive Asset

Liberating education must be perceived as a societal asset which at each point in time is produced in a given amount (e.g., six million man-years worth, annually), is of a given quality (e.g., in an average college, slightly lower than last year), and is alloted to certain groups (e.g., much more to middle than to lower classes). Much of the following discussion concerns the conditions under which the allocation of higher education may be changed to make it less inequalitarian, while sustaining quality as much as possible.

A liberating education is one that enables the young person to continue to evolve from a less to a more civilized being (or, more dramatically, to grow beyond his animal origins and become a mature member of human society). The school is, at least potentially, a major agent of this education. Here the young person ought to acquire both the culture of his society and leave behind the social and psychic shackles he brings to school, because he suffers from racism, low class status, or obsolescent views of the parent-generation. "Liberal arts" is another term used in this context. We prefer "liberating education" because it stresses the dynamic aspect and because it calls attention to the need not just to learn new ways but also to become free from what one already is. The American public high school, it is widely agreed, does not successfully complete the liberating process; some argue that it actually reinforces the inhibitions from which the students must later be liberated.

Now, if each member of society is equally entitled to this liberation, and we see no reason why one is entitled to it more than another, arrangements are called for which will provide for universal access to such an education. This is, of course, one of the reasons "open" enrollment and education free of charge (so as not to make enrollment selective by income) are provided by the high schools. Access to a high school education is in fact, far from completely universal--as indicated by differences in quality between public and private schools and by dropout rates which are related both to class and racial status. Still, education at this level is distributed on a much more egalitarian basis in this country than is higher education. The chief deficiency of the high school is not its limited availability but the shortcomings of the education it provides. Hence, the great concern with the quality of liberating education in colleges. And, as colleges are much more selective than high schools, especially if only those who complete their college educations are taken into account, and not all who initially enroll, we see that selectivity and the criteria of selection are issues of the first importance.

TABLE III-1

YEARS OF SCHOOL COMPLETED BY WHITE PERSONS 25 YEARS
AND OVER--MARCH 1968*
(In Percentages)

	Distribution	Accumulative Distribution
Less than high school graduate	45.1	100.0
High school graduate	33.7	54.8
Entered college (but did not graduate)	10.1	21.1
College graduate	11.1	11.1

*Source: U.S. Bureau of the Census, "Educational Attainment: March 1968," Current Population Reports, Series P-20, No. 182 (April 28, 1969), Table I, page 10.

As the preceding data indicate, while a majority of the nation's young people complete high school educations, only a minority obtain college educations, either liberating or technical (e.g., preprofessional). We turn first to explore the ways in which liberating education may be made more broadly available than it is now.

B. Major Options of Reallocation

If it is assumed that high schools do not provide the necessary liberating education, we have the following options.

1. Make the High School Much More Effective as an Educational (As Distinct from Training or Custodial) Institution

While efforts to this end are being made, it is widely agreed that a reformation of high schools is unlikely and that other institutions will have to assume at least part of this responsibility.

While we have not studied high schools, it is easy to see why it would be best if they would be reformed. They waste scarce resources and add to the problems they are supposed to solve. Educational institutions are rarely neutral in their effect. If they do not inspire commitment, they tend to alienate. However, we go along with most experts who agree that it would be Utopian to rely on high school reform to achieve a level of liberating education sufficient to meet the present society's standards. That we cannot wait for the high schools becomes even more evident if we note that society is expected to become, over the coming years, even less oriented toward production and more toward personal or cultural fulfillment. These changes require more liberating education, of the highest possible quality. Thus, for the rest of this discussion we assume that at least some of the needed major improvements will take place elsewhere. The ways in which high schools may be reformed do deserve urgent attention and study, nonetheless.

2. Complete the Liberating Education in College

American colleges have always continued where the high schools leave off. They not only follow along in the time sequence without much of a break, but they also tend to continue the same mission rather than shifting to a different one. It is as if society has said, "O.K., high school does not provide enough liberating education; let college complete it."

Because these educational goals are not achieved in high school, education is stretched over more years. This, in itself, is not necessarily a loss. As long as college education is committing rather than alienating, the fact that growing proportions of young people delay their entry into the labor market and life of work by going to college for one to five years is in itself quite desirable. Our society devotes too much time and energy to work as it is, and too little to socially useful nonwork pursuits, of which education is a prime example.

To favor a society in which more young persons will be exposed to liberating education for more years, as we do, does not entail a romantic view of the nature of mass liberal arts education. The student on an average campus may spend only part of his time relating to ideas, "growing" intellectually and as a person; he may spend more time relating to other students. And, the quality of the communication of ideas on an average campus may be quite low, as a result of poor quality and lack of relevant preparation of the teachers. But, unless the experience is so regimented and fragmented that it alienates the average student from the liberal arts culture rather than bringing him to share in it, such a life on the campus seems preferable in terms of personal growth to the life of unskilled or semi-skilled work in which he would otherwise be engaged. From a societal perspective, the loss in production is tolerable, and the improved quality of its membership is highly desirable.

Last, but not least, college educated persons are significantly more open minded on most issues than high school graduates. It is widely held that education is associated with liberalism, especially on noneconomic issues.

> The higher a person's socioeconomic status, and especially his education, the more liberal his political preferences, when these do not deal directly with class (rich-poor) distinctions--i.e., the more liberal his democratic values, such as civil liberties, freedom of speech, and so on.*

This association, reported by Berelson and Steiner on the basis of data collected at least a decade ago, still holds. More highly educated persons are still more "liberal" on a larger variety of issues. For instance, Harris reports that in February 1969, 50 per cent of those with college educations favored diplomatic recognition of Communist China by the U.S.A., as compared to 27 per cent of those with 8th grade educations or less.* Similarly, the more educated tend to reject prejudices about Negroes to a greater extent than those who are less well educated. Asked to agree or disagree with the statement "Negroes want to live off hand outs," 62 per cent of those with eighth grade educations or less agreed, while only 35 per cent of the college educated portion of the sample agreed.*

Nor do as many of the college educated, as compared with the less educated, feel shock or anxiety when confronted with diversity or evidence of social change. Asked "Do you believe that life today is getting better or worse in terms of morals?", 62 per cent of those who were college educated answered "worse"--as compared to 84 per cent of grade school educated persons.* And in a recent survey on attitudes toward abortion

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*Bernard Berelson and Gary A. Steiner, Human Behavior: An Inventory of Scientific Findings (New York: Harcourt, Brace and World, Inc., 1964), p. 428.

*Harris, February 24, 1969.

*Harris, September 16, 1968.

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*Gallup Opinion Index, September 1968, p. 28.

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laws, 58 per cent of the college educated as against only 37 per cent of those with high school education and 31 per cent of the grade school educated gave a favorable response to the question: "Would you favor or oppose a law which would permit a woman to go to a doctor to end pregnancy at any time during the first three months?"*

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*Gallup Poll, as it appeared in The Washington Post, November 30, 1969.

As already described in some detail in Part II of this report, a poll was taken on behalf of Fortune magazine in October 1968 of 723 college students and 617 nonstudents between the ages of 17 and 23. The study allows one to see that while not all the students are more liberated, more oriented toward the future and open to change than the nonstudents, the young Americans who are most innovative--about 10 per cent of the total youth studied--are among the college educated. Additional data, not reported here, show that these "forerunners" (about 42% of the college students) set patterns followed first by the other students, then, the noncollege youth.*

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*Fortune, January 1969, p. 70.

TABLE III-2

BASIC VALUES*
(In Percentages)

To Which of These Ideas Do You Personally Subscribe?	No College	Practical College	Forerunner College
Hard work will always pay off if you have faith in yourself and stick to it.	75	80	59
Everyone should save as much as he can regularly and not have to lean on family and friends the minute he runs into financial problems.	73	65	51
No matter how menial the job may be, doing it well is important.	73	73	62
A man should stand on his own two feet and not depend on others for help or favors.	68	58	50
The individual who plans ahead can look forward to success and achievement of personal goals.	65	64	46
Hard work keeps people from loafing and getting into trouble.	54	34	18
Depending on how much strength and character a person has, he can pretty well control what happens to him. You make your own luck.	52	53	48

*Source: Fortune, January 1969, p. 179.

If we examine the first two columns, we see little difference between the attitudes of college and noncollege youth; in both groups we find majorities endorsing traditional values embodied in the Protestant Ethic and significant minorities rejecting them. The greatest difference, and an atypically large one, concerns the question: "Hard work keeps people from loafing and getting into trouble." Here about half of the noncollege youth agreed, as compared with only a third of the college students.

TABLE III-3

SOCIAL CHANGE*
(In Percentages)

Which of The Following Social Changes Would You Welcome?	No College	Practical College	Forerunner College
More emphasis on law and order	91	78	39
More emphasis on combating crime	88	95	70
More respect for authority	87	73	41
More emphasis on work being meaningful in its own right	85	78	88
More emphasis on self-expression	69	68	90
More freedom to debate and disagree openly	68	73	92
More freedom for the individual to do whatever he wants provided he doesn't hurt others	65	69	84
More acceptance of other people's peculiarities	60	75	93
Less emphasis on status--on "keeping up with the Joneses"	57	75	80
Less emphasis on money	57	53	80
More emphasis on private enterprise	42	55	36
More emphasis on the arts	42	55	84
More vigorous but nonviolent protests by blacks and other minority groups	35	41	64
More sexual freedom	19	35	48

*Source: Fortune, January 1969, p. 180.

Nor is much difference found between the attitudes of noncollege youth and practically-oriented students toward various kinds and levels of social changes. There are large differences on only two issues (sexual freedom and status), and great similarity on 12 issues. Again, the consensus here tends to favor traditional values (e.g., freedom to debate, respect for authority) and not fundamental innovations (e.g., demonstrations, sexual freedom).

The third group, the "forerunners" (reported in the third column), differs markedly from both noncollege and practical college students. While similarities (i.e., small differences) are encountered, differences of 15 per cent or more, in comparison to the noncollege, appear in five out of the seven basic value questions, and in 11 out of the 14 social change questions; all point away from the Protestant Ethic.

The above differences within the college-group should alert us to the possibility that education per se does not lead to liberation, and that both the kind of education and the setting where it is imparted make a difference. A study started in 1950, and covering the period 1950-59, further supports this point; students who had conservative attitudes to start with did not change them, but rather had them reinforced through associating selectively with like-minded students, and joining appropriate organizations, such as fraternities. More significantly, liberal minded students were able to maintain their attitudes by the same process. The study reaches this general conclusion:

> In studying the development of liberalism or conservatism in a special milieu such as the college campus, it is essential to consider as relevant context not only the climate of opinion of that institution as a whole, and not only the climate of opinion in the

> country at large, but also the explicit norms of particular social subsystems.[*]

Still another study raises some doubt about the general concept of "liberalization" of students, as follows:

> In conclusion, college has a socializing rather than a liberalizing impact on values. It softens an individual's extremist views and persuades him to reconsider aberrant values. It increases the tolerance potential of students towards differing beliefs, social groups and standards of conduct so that they can move about with minimum friction in a heterogeneous culture.[*]

Although this study has been subjected to some criticism on methodological grounds[*] and both it and the one previously cited were conducted in the fifties during the "passive" decade on college campuses, the points they bring up should alert us to variations within the college educated group. At the same time, college-educated persons in the 1960's do show greater liberation when compared to other groups in the population. It may then be safely concluded that, regardless of internal variations, college does provide a population better equipped to live in a culturally heterogeneous and changing society. Hence, if we are to reform society, reduce prejudice, enhance peace, and provide the consensual bases for most other needed reforms, a college education must be provided for a larger proportion of the population.

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[*] R. K. Goldsen, M. Rosenberg, R. M. Williams, Jr., E. A. Suchman, What College Students Think, (New York: D. Van Nostrand and Co., Inc., 1960); pp. 123-4.

[*] Philip E. Jacob, Changing Values in College (New York: Harper and Row Publishers, 1957); p. 53.

[*] Allen H. Barton, "Studying the Effects of College Education - A Methodological Examination of Changing Values in College," (The Edward W. Hazen Foundation, Conn., 1959).

But not just any kind of college education. It is precisely liberal arts, and not technical education, which opens minds. True, we cannot credit college education alone with all the "progressive" qualities of its graduates; there are other important differences between graduates and persons not enrolled in college. For instance, those enrolled in college generally come from families with higher incomes and have more "progressive" views on some issues to begin with. These attitudes either survive college or are extended by it, but are not created there. Furthermore, studies of the effects of college on the values of graduates raise significant questions on the extent and duration of the effect.

Berelson and Steiner record some evidence indicating that the attitudes learned during this period (early adulthood) are the ones which will become the general reference framework for the individual throughout future life.* We may infer from this that while attitudes on specific issues may actually change at college there will tend to remain a general precollege orientation. As to the question of how long the specific effects of college will last, Berelson and Steiner conclude, on the basis of Stouffer's 1955 study, that: "As each new generation in this country is better educated than the one before, it is more tolerant; but as it grows older it becomes less so."* Still, even if the amount of liberation sustained is not large, it is worth encouraging through attendance at institutions of higher learning, especially compared to alternate uses of time and resources. We hold no romantic view of the depth, extent, and quality of the effects of a college education. Even so, he who is concerned with equality of opportunity must ask how this asset is to be distributed.

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*Berelson and Steiner, op. cit., p. 561.

*Ibid., p. 573, following S. A. Stouffer, Communism, Conformity, and Civil Liberties: A Cross-Section of the Nation Speaks Its Mind, (New York: Doubleday, 1955).

If liberating education is held to be an asset all are to share in, one must ask--how much? A Utopian society can be evisioned in which the process never ends and people devote every other year, or two hours every day, to liberal arts. Marx depicted such a world.

> . . . whereas in the communist society, where nobody has an exclusive sphere of activity, but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing today and other tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticize after dinner, just as I have in mind, without ever becoming hunter, fisherman, shepherd or critic.*

Or, there could be a shifting back and forth between work and study, with "sabbaticals" for educational purposes being provided to all, every three years, rather than every seven,* to university professors only. But in the present world the question "How much?" cannot be avoided. The society often appears to have agreed on the answer, "four years," as symbolized by the rapid rise in demand for a "college education," as if only to ask were to receive. But, in fact, the society neither provides, nor can provide this answer now, nor will it be able to do so, at least during the early seventies. "College education for all" is one of those ambiguous slogans which has little bearing on societal reality. Society now provides four years of college education to a minority: roughly 11 per cent of the white students' age cohort, and 5.6 per cent of the nonwhite age cohort.* Thus, it is clear that in spite of the relatively large percentages of persons from any given age-cohort enrolling in college, only a small proportion actually receive the full *four* years of education, whether they are white or nonwhite students. One could, of course, suggest that each person who wishes would be able to gain four years of college education if all economic and other barriers to such education were removed. In our judgment this is not possible in the next five to ten years without a very substantial sacrifice of quality of education because of the shortage of qualified staff. From a political viewpoint, the losses in quality might be so great as to make such a change not practical. Most educational institutions are not financed by their clients, and educational policy requires public approval; hence, these institutions find it difficult to pursue a policy which the majority of the public does not legitimate, even if this would be desirable on other grounds. A way to proceed which would both increase equality of education *and* seems politically tenable, may be to *sharply broaden enrollment but reduce temporarily the number of years of education which will be provided*, as well as introducing simultaneously other specific measures to advance quality and equality. These we shall discuss one at a time.

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*K. Marx and F. Engels, The German Ideology, Parts I and III (New York: International Publishers, Inc., 1939), p. 22.

*For additional suggestions along these lines see Benjamin Graham, The Flexible Work-Year (Santa Barbara, California: The Center for the Study of Democratic Institutions, 1964).

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*We were able to get pertinent data only on the 25-29 age-cohort, so that the above statement actually reflects the conditions prevailing between the years 1960-64, the periods when these groups graduated from college. Since the percentages have not shown any sharp changes in the past, there is no reason to believe that present conditions will be otherwise, and we may use the above data as reliable indicators of the phenomenon.

C. Expanding Enrollment: How Far?

We favor expanding enrollment in the sense that every graduate of a high school (and everyone who meets the high school graduation requirements through examinations) should have the opportunity to enroll in a college.

There are several reasons we use the term expanding enrollment rather than "open enrollment." "Open enrollment" is misleading because the colleges are not open to all comers; some admission requirements exist at practically all the "open" institutions. Nor do we see a way they can be avoided. First, a certain level of previous education is required. Second, limitations are imposed by residential requirements, available space, or financial resources. Even when no fees are charged, enrollment is limited and stratified by the ability to meet the other costs of studying. The term "expanding" indicates that admission policies will be broader and will continue to expand, as various changes in colleges (discussed below) and in society (e.g., less inequality in the distribution of wealth) are introduced. No jump from the present into a true egalitarian system is expected or seems feasible.

Rapidly expanding enrollment tends to create a mass education system. Increases in the budget of higher education to support a larger teaching staff and intensive compensatory education can reduce the loss in quality but, unless one compares the opening system with one that is only slightly selective, there seems to be an unavoidable loss in quality of education, at least in the short run. Relatively open enrollment is also apt to lead to almost automatic promotion from grade to grade, and semi-automatic graduation. Advancement in such a system tends to be dissociated from most measures of achievement. Now, colleges are being pushed in a direction similar to that taken by the public high schools--to turn to the production of truly mass education. While the pressure to expand enrollment has many sources, the most immediate and powerful one is the group made up of students from disadvantaged backgrounds and their supporters--students who are disproportionately excluded under traditional, selective admissions criteria.

Theoretically, one could provide for social justice in higher education without dropping the admission barriers by providing students of all backgrounds with a proportionate share of the available openings. However, this would require the suspension of merit as a criterion for admission, at least merit as registered by high school grades and college tests. While reliance on some other measures of merit might increase the proportion of students from disadvantaged backgrounds in the enrolling body, these students would almost surely still be under represented. Criteria which openly favor minorities are difficult to legitimate. And, as more and more white parents demand places for their children in college, it will become increasingly difficult to admit large numbers of less qualified minority students (by whatever criteria one uses) at the expense of more qualified white ones. Social justice can be advanced most readily in an expanding system which admits both an increased number of whites and non-whites. Social justice and generally expanding enrollment go best hand in hand.

Assuming that higher education could be provided to all who seek it, we still must ask--how much? Should the right of every man to be educated extend through undergraduate education? Graduate education? Post graduate? Where is the limit? The answer that the system should provide "all the education a qualified person is able to absorb" is not satisfactory because the term "qualified" suggests a selective system which begs the question--how far should education be provided if present criteria of selectivity are partly or wholly suspended?

This is far from a trivial question; the addition of one year of universal undergraduate college education would entail costs on the order of ten billion dollars, or more, depending on how much dilution of quality is tolerated.

1. Completion of Liberating Education as Cut-Off Point

One place to draw the line between universal and selective education is where a liberating ("humanizing," "broadening," liberal arts) education ceases and a technical one begins. Without entering here into a detailed discussion of the functions of higher education, let us simply state that it is supposed to both enlighten and to provide specific skills and information--to help form better human beings and to prepare men and women for those vocations which require "higher" technical education. The line, of course, is often blurred; the liberal arts, for example, serve to prepare students for business careers or social work. However, most areas of higher education can be placed in one category or the other. Ideally, all citizens should receive the same basic amount of liberating education because there is no reason why one citizen is entitled to, or needs, more self-expansion than another. Conversely, technical education should be limited in rough proportion to the projected need for persons requiring such preparation. (This raises complex issues as to whose values are to be considered in making such projections, a subject we cannot explore here.) This may sound as if we recommend a system in which the high-powered technocratic positions are reserved for the elite, while "self-expansion" is available to all. We suggest below a mechanism which would enable all to share equally in the access to higher technical education.

Graduation from high school could serve as one line of demarcation, indicating the point at which the focus on a liberating education ends. Unfortunately, American high schools do not provide sufficient education of this kind and many parents actively seek to prolong it in the more selective college system. About 60 per cent of all high school graduates enroll in college; however, just over a third of those graduating from high school graduate from college, as of 1968.* Hence, any suggestion that liberating education be completed in high school is bound to be bitterly and widely opposed, making a policy which draws the line at the end of high school an impractical choice.

But does it follow that a college education should be provided to everyone? The pressure is surely on to do just that. But such a mass higher education will, at best, be a very diluted college education, of the kind now provided by some mid-western state universities where there is semi-open enrollment during the first semester (after which they screen out many freshmen). And, sheer expansion of the system tends to create an educational factory, which does not liberate but rather alienates those processed by it. It will be a very expensive system because rapid expansion would require using inferior teachers who do not cost much less than good ones, and because facilities, from classrooms to cafeterias, must be provided for very large numbers of people. Universal (or near universal) college education would almost surely kill, at least for the next decade, any hopes for significant improvement in the quality of higher education and for financing and staffing large scale intensive compensatory education, which, for reasons spelled out below, is essential to maintain quality when admission barriers are lowered or removed. It has been argued that mass education does not entail a decline in quality, that education now is better than it was two generations ago, when the system was much more elitist. This observation remains to be verified; even if it is true, the difference may be due to what has been a much slower expansion than that envisioned now. Furthermore, the change in the past benefited from a large rise in the prestige of education and commitment to learning. Now, little more gain of this sort can be expected as we are already close to the "ceiling" of such a commitment. If anything, we are moving in the opposite direction, with many students questioning the value of their college education.

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*U. S. Office of Education, Digest of Educational Statistics--1968 (Washington: Government Printing Office, 1968), p. 7; and Bureau of the Census, Current Population Reports, Series P-20, No. 182, April 28, 1968, p. 9.

Thus, as we see it, an "early" cut-off point would be preferable. It would be probably best to narrow the neck at the end of high school, at least for the next five, and probably ten years, until quality and equality of higher education can be built up. But, in view of the public demand for college education, it seems impossible to turn back the clock.

Possibly it is not too late to draw the line at two years of college education, and this is our recommendation now. We say "now" because we expect that just as the definition of what is considered "poverty" has moved upward in terms of income over the years, so will the societal concept as to what is "sufficient" liberating higher education. The suggestion to focus on liberating education in the first two years and on "higher" technical education in the following ones is in line with a distribution already found in many colleges;[*] we suggest that this tendency be explicated and extended.

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[*] To document this statement a detailed analysis of curricula would be required.

"Four years" of college education should not be treated as a sacrosanct or "obvious" concept. The British higher educational system, believed to be at least equal in its achievements to the American one, does the job in three years; four year colleges are practically unknown in the United Kingdom. The fine Israeli universities educate undergraduates in three years. Even in the U.S.A., the four year college was not the norm until after the first world war.

The concept of a four year college cannot be considered an immanent characteristic of higher education. Thus, Jencks and Riesman state:

> We do not fully understand how America became committed to a four-year undergraduate curriculum as against the three-year English cycle. Many nineteenth century colleges had tried other variations, especially in the professional schools. By World War I, however, most colleges had come to feel that a B.A. or B.S. should take at least four years.[*]

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[*] C. Jencks and D. Riesman, The Academic Revolution (Garden City, New York: Doubleday, 1968), p. 31.

Significantly, this pattern was adopted by educational institutions regardless of their function. An example is offered by the same authors:

> Professional schools of law, for example, usually required three years of study. But they offset this apparent lapse from academic rigor by requiring that their applicants do several years of undergraduate liberal arts work before starting law school.*

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*Ibid., p. 31.

One may argue that the British and Israeli systems are more selective, as that of the U.S. used to be, and hence they can do their job in three years. Also, it might be argued that their high schools have already done more of the job. But, first, these statements have yet to be verified. Second, we suggest below some ways American colleges may be made more effective and thus save some time. Most important, we do not expect the two year college to provide the same education the four year one does--in only two years. It could be expected to take over the liberal arts component; para-technical, technical, or para-professional education, which does now constitute part of the four year program, would be delegated to the technical, professional or graduate schools, to which enrollment will not be, nor need to be, "open" or massive. While everyone is entitled to the same proportion of a liberating education, there is no reason why technical education should be given to more people than those who need it for their work careers. Here is needed not universal access, but only nondiscriminatory admission.

We note in passing that we have drawn on sociological research and theory in outlining our view of what the functions of a college education are and of how the program might be divided. There seems to be, though, no deep sociological reason for drawing the line after two years. It could be drawn at higher or lower levels; as indicated earlier, we pragmatically draw it at the two year mark to allow enough time for a liberating education without generating too much public resistance. Drawing it much later, at four years, would--in the near future at least--dilute education too much. One could, perhaps, make the division after one and a half or two and a half years; we are here concerned with the logic of stopping "half way," not in pinpointing the exact stage at which liberating education should be cut off in the foreseeable future.

2. Two-Year Colleges: On The Rise

The best argument for two years as a good point to stop is the fact that this has already become a frequent cutting-off point. (See Table III-4 on following page.) Jaffe and Adams have found that two-year colleges are increasingly becoming the main recruiters of undergraduates. Thus, where two-year colleges have been in existence for longer periods, the proportion of first-time freshman attending them has grown steadily, to the point where a full 80 per cent of all first-time freshmen in California enrolled in them. The authors conclude that this growth is both a function of the availability of two year colleges, in terms of sheer numbers, and the length of time they have been in existence. Combining all data into a national picture, they conclude:

> We would expect that the two-year colleges' national share of all first time freshmen will rise from the 38% reported for 1967 to perhaps 70% by the early to mid-1980's, duplicating the current situation in the West. A few states, principally the New England states with a long and vigorous tradition of 4-year (largely private) colleges and universities, may well fail to establish networks of public 2-year colleges, as has been the case to date.*

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*A. J. Jaffe and Walter Adams, American Higher Education in Transition (New York: Bureau of Applied Social Research, Columbia University, April 1969), pp. 33-35.

TABLE III-4

GROWTH IN ENROLLMENT AND NUMBER OF JUNIOR COLLEGES*

Year	Total			Public			Private		
	Number of Colleges	Enroll-ment (000)	Per cent Change	Number of Colleges	Enroll-ment (000)	Per cent Change	Number of Colleges	Enroll-ment (000)	Per cent Increase
1961	678	749	-	405	645	-	273	104	-
1962	704	819	+ 9	426	713	+11	278	106	+ 2
1963	694	928	+11	422	814	+14	272	113	+ 7
1964	718	1044	+13	452	921	+13	267	123	+ 9
1965	771	1293	+12	503	1152	+25	268	141	+15
1966	837	1464	+11	565	1317	+14	272	147	+ 4
1967	912	1671	+11	648	1528	+16	264	143	- 3
1968	964	1922	+15	708	1747	+14	273	175	+22
7 years per cent increase	+42%	+157%		+75%	+171%		±00%	+68%	

*Source: American Education, December-January, 1968-1969, p. 30.

Thus, even if New England and similar educational systems continue to be excepted from the rule, it is clear that the two-year period of higher education has become a new reality for increasingly larger numbers of students. It is on this basis that Jaffe and Adams feel justified in speaking of a "dual higher education establishment"* (comprising both two-year and four-year colleges), and what leads us to accept the two-year mark as our working cut-off point. There are two problems: there is pressure on these colleges to expand to four years; and there is pressure on the student to transfer from two to four-year colleges, and to take at the two-year school those programs which lead to a four-year college. We seek to legitimate the cut-off point which has evolved and to counter these pressures which stem from a psychological need, not a well-documented, educational need.

3. Policy Levers to Enhance Two-Year Colleges

An increasing number and proportion of the student body could be further encouraged to stop after two years if:

a. the rationale for the cut-off point were widely circulated, to legitimate such a cut-off point and the measures to discourage continuing after this point;

b. state legislatures would pass laws forbiding two-year state colleges from becoming four-year ones (now two-year colleges are frequently set up with this aspiration and encouraged, by opportunity, to become four-year institutions);

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*Ibid., p. 32.

c. the focus of increased federal assistance, at least for the time being, could be on the first two years (plus the year of national service);

d. junior divisions (two years) might be established in those four-year colleges where they do not now exist. Such a division has been recently suggested for Columbia University by Dean Aaron Warner.

To reduce the prestige differences between two and four-year institutions, which tend to stigmatize those who go to the two-year ones or push them to four-year institutions, one might assign students randomly, or on the basis of proximity, to two-year colleges and to junior divisions of those colleges which participate in the program. (The system used in California, which differentiates enrollment between the two kinds of colleges by grade level has the opposite effect.)

Affiliation of two-year schools with four-year schools or universities may also help. More than a change of title may be achieved in this way; a change in availability of faculty, books, and other facilities is involved. That is, higher prestige would be associated with a genuine change in quality.

Not all the factors point in the same direction. In some two-year colleges, especially some of those called community colleges, we find now a faculty strongly committed to its teaching mission--especially to helping the disadvantaged or educating the next generation of Americans. It would be undesirable to bring them into close contact with faculty who are research-oriented. The correction may come not by isolating the two-year college, but by encouraging those who teach the first two years in the junior division of all institutions of higher education to see teaching as their prime mission. The mechanisms for this are relatively clear, but are best explored after we explain the role of research in the revised scheme we would like to encourage (see Part IV).

Professions and employers should be encouraged to accept two instead of four years as adequate a qualification for many positions especially if the quality of the two years were enhanced. A major factor here is teacher training; a teaching certificate now requires a B.A. It would be beneficial to determine if one could not certify teachers after a two year program.

A degree of Associate of Arts should be awarded after the first two years--even in four-year colleges--making the mark more visible and termination of education at this point more rewarding. If an A.S. (Associate of Science) would recognize two years of technical education, and fewer B.A.'s and B.S.'s would be given as a result of a clearer termination point after two years, the introduction of this suggested innovation would be made easier. Non-federal resources, public and private, should be released and redirected as much as possible to provide a more egalitarian and better education during those two years. Once this goal is approximated, the line may be moved up to three or four years, but the stage at which this could be done prudently is at least ten years away.

4. Reducing Economic Barriers

So far we have dealt with the barriers posed by restrictive, selective, and slanted admission criteria and policies. But even if those were to disappear, equality of opportunity in higher education would not progress far if economic barriers are not reduced.

If equality of higher education is to be vigorously advanced, we must reduce these barriers to access, as we have, in part, for public high schools. *This could be achieved by making postsecondary education free, up to an agreed-upon level*. This is, in fact, a current trend, as public college education is expanding in terms of the proportion of students enrolled as compared with those attending private schools.

Actually, such a universal system is not the most conducive way to advance equality of opportunity in higher education. As the tuition costs are only part of college expenses, the reduction of inequality of access also requires the provision of *subsistence allowances* to students from poor backgrounds, and even to their families (either of origin, if they are their main source of support, or of prevention, if the student is married and has children). To provide all students with such an allowance would make the system so expensive that it might lose the necessary public and political support. We see that even countries with a much smaller poor sector than the U.S.A., such as Britain and West Germany, are moving away from advancing social justice by *universal* provisions (same services for rich and poor alike), in favor of *differential* systems, which award *more* help to the poor. The recent welfare proposal of President Nixon, which draws on a form of negative income tax rather than a family allowance, is a decision which favors a differential over a universal system. (A family allowance is typically given to all families; a negative income tax supports only the poor.)

A free tuition system would be a universal one because it would benefit the middle classes as much as the minorities and the poor. We propose that it be dropped and replaced by a differential system in which *the rich pay tuition, even in the public colleges, and the poor receive not only free tuition but also a substantial allowance*. To determine how much aid students are entitled to, a scale of parents' income would be established. The number of ranks and the differentiation among them would be selected through economic study and political negotiation. Here, we seek only to illustrate the principles involved.

Students whose parents' income is below $6,000 per annum would get free tuition, $2,400 for study costs and living allowance, and $600 per each dependent. Students whose parents' income is between $6,000 and $12,000 would be provided with free tuition, and those whose parents' income is higher would be charged full tuition, even in public institutions. Of course, when the system is actually implemented, several additional gradations will have to be introduced.

The income level of students' families can be determined from the parents' statement filed with the Internal Revenue Service. (This is not a violation of the law; the law prevents only the Internal Revenue Service--not the tax payer--from releasing these data). Some colleges already demand such a copy.

The federal government should underwrite most of the cost of this program through interest free loans to be repaid gradually if and when the student's income rises above a given level. We are not interested here in developing yet another scheme for support; there is already a large body of literature on the subject. We only seek to highlight the following criteria:

a. the federal govenment is to provide a high proportion of the costs of undergraduate education for the first two years;

b. need rather than merit will be the basis of this support;

c. support will be given as a loan rather than as a fellowship.

The loan will not constitute a burden as it will be interest-free and will not have to be paid back unless the student can well afford it. It will, however, provide for restoration, over the years, of some of the funds (as the total costs of the system surely will mushroom with increased population as well as the proportion of those enrolled), and will serve to cover part of the costs of the suggested program. (See Appendix A of this section for a discussion of some of the difficulties involved in the present loan system.)

5. Admission to the Senior College and Beyond

Assuming that the third and fourth college years of institutions which would go along with the suggested changed would be mainly "technical" in their orientation, not unlike graduate schools, who should be admitted? And, who should be admitted into graduate education? We suggest that for the time being the upper portion of the educational pyramid will narrow considerably after two years of higher education; we see no reason every young man and woman should have access to higher technical education. Possibly only 4.5 per cent to 6.5 per cent of the age stratum (about the per cent now entering graduate school), or a slightly higher proportion if one wishes to support an expansion of the higher technical system of society, should be accommodated. We do not assume the federal govenment will force such a narrowing of the higher education system at this level; however, we do expect that it can persuade a significant number of colleges to consider such an approach and distribute financial support so as to encourage such a development.

The question remains--how will social justice be enhanced on this level? Even if intensive compensatory education was available to those who needed it, we would not expect the effects of a disadvantaged background to be erased by the time students reached the gates of the senior colleges (or senior divisions) or graduate schools. It follows, then, that admission to senior college and to professional and graduate schools by merit would admit not only a much smaller proportion of disadvantaged students than there are in the society but also a much smaller proportion of such students than is found among those who complete two years of college education.

The significance of equality of opportunity on this postjunior college level hardly requires elucidation. Higher technical education is the basis for obtaining powerful positions in the society in terms of income and status, and is a source of "success models" which are needed if persons from disadvantaged backgrounds are to be motivated to accept the strains and costs of higher education. In addition, screening by merit may only serve efficiency in the narrow terms of a technocratic system, but it does away with considerations of social justice. In view of the aforementioned facts, we suggest that corrective steps be taken to bring the proportion of disadvantaged students admitted to the senior colleges in line with the proportion in the graduating classes of the junior colleges, so that this transition will not stifle social justice. The system should be so designed as to limit the total numbers of students admitted into higher technical education without being discriminating. This can be achieved by securing for students from disadvantaged backgrounds a proportional participation even if the total program is relatively small.

Corrective steps to produce greater social justice can be undertaken by eliminating discriminatory admission tests and by lessening the reliance on grades in those areas in which white students are apt to excel.

But this, by itself, may not be sufficient. Some form of a quota may be required, if equality of higher education is to be advanced. Students within the quota would be selected from those of disadvantaged background on the basis of merit. The basis of the quota could vary. Using the proportion of the disadvantaged in the population would yield the quickest results but also generate maximum opposition. Using the proportion who completed two years of higher education as the relevant base would mean a somewhat different quota each year, expanding year after year toward the proportional limit, without causing a sudden jump.

The proposal is especially easy to justify because it simply ensures that those who complete two years will have an equal chance if they seek additional education. Using the proportion of disadvantaged persons in the population as a basis for admission would, at least in the near future, give students from a disadvantaged background greater opportunity to enroll than white students--and more than their equal share, as the proportion of disadvantaged who complete two years of college education is substantially lower than their proportion in the population. We apply here a new principle to approximate equality, a principle which seems to us both just and practicable. Rather than using the "input" at the beginning of the process as the basis of rates for all its steps, we suggested eliminating at each step all hindrances to further advancement occurring at that step. In the long run the effect of the two approaches is the same; in the short and intermediate range the step-by-step "value-added",* approach seems more effective.

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*"Value added" refers to a tax form in which each stage in a production process is taxed according to the value added rather than the final product only. The term seems applicable here as an analogue.

The absolute numbers involved, it should be emphasized, are not large. If the percentage of disadvantaged students admitted above and beyond those accepted on the basis of sheer merit as measured by traditional criteria were increased each year to match the rising proportion graduated by the junior colleges, this still would entail no more than several thousand more students. The basic reason for this is that the number of students from disadvantaged backgrounds who graduate each year at this level is still not high, and cannot be increased rapidly without first increasing the number of freshmen and sophomores of such background. As white enrollment also rises, the proportion of students from disadvantaged backgrounds may grow, but probably not at a rapid rate.

If the system had been introduced in March 1968, the following figures would apply. Among college-age youth under 21 there were then 63,000* Negroes and 1,118,000** whites with two years of college education. And in the third year of college, without any "rationing," there were 24,000 Negroes and 520,000 whites. To maintain during the third year the same proportion of Negroes as finished the second year, 5.3 per cent or 28,832 Negroes would have to be admitted, or 4,832 more than would have been admitted otherwise.

6. Junior Technical Education

Under the suggested system, the overwhelming majority of all students over the next five to ten years will not continue to study beyond their sophomore year. Many of them will seek access to lower middle class occupations and semiprofessions, from which disadvantaged persons are barred almost as much as from the top positions. The existing situation here is well summarized by Oscar Lewis who stated: "The majority of Afro-Americans work not in their neighborhoods but for one of the non-neighborhood corporations or employers, and so it shall be for as far ahead as we can see. The black problem is that while we are 11 percent of the population, we have only 2 percent of the jobs at the top, 4 percent of the jobs in the middle, and are forced into 16 percent of the jobs at the bottom--indeed into as much as 40 percent of some of the jobs at the very bottom. Clearly, our minimum objective must be to capture 11 percent of the jobs in the middle and 11 percent of the jobs at the top." Lewis goes on to indicate that higher education provides the major channel of mobility into these middle and higher levels. Higher technical education and general college education leads to the higher 11 per cent, while lower technical education is more likely to lead to the middle 11 per cent. It is therefore important to develop opportunities for "lower" technical training in conjunction with junior liberal-arts education, in addition to securing an equitable share of the opportunities for higher technical education (in graduate schools and professional ones), a subject we just explored. There are several ways in which this can be achieved; each method differs in the extent to which it neglects the liberal-arts component as it promotes the technical one. The following combinations are found:

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*Population Characteristics, op. cit., p. 12. Note that these figures measure all those in an age cohort but not those who graduate in a specific year and that these figures are used here for illustrative purposes to provide an indication of the numbers involved and not as actual projections.

**Ibid., p. 9.

a. combining within two years of college a liberal-arts program, a degree of Associate of Arts, with an extensive program of technical education;

b. programs in two-year colleges which are openly committed to technical education (e.g., preparing TV repairmen), and provide only a limited amount of liberal-arts education;

c. professional schools (e.g. nursing) which provide liberal arts on the side;

d. combined programs of liberal art and technical education which require more than two years;

e. still another variation in which a mainly liberal arts program in the first two years would be combined with some technical education, and a full technical program in the third one.

Whatever the combination, two issues are at stake here. First, if we subscribe to the principle that each student who seeks two years of liberating education should be entitled to such a program, we must back up such a commitment with the needed opportunity for enrollment and study. Furthermore, we must see to it that economic pressures and educational conveniences will not, in effect, pressure persons, especially the disadvantaged, to enroll in programs which provide, on the junior level, mainly technical education and only a semblance of a liberating program. A careful regulating of technical programs which also lead to the A.A. degree may be one procedure; economic aid (see above) might be another; still others must be experimented with. It should be possible to establish much more precisely than at present the distribution of disadvantaged persons in these programs. Are they more often found in those programs which are excessively technical? Are students from disadvantaged backgrounds foregoing opportunities for two years of liberal-arts education because of economic pressures to rapidly gain a well-paying job? Are they tending towards programs which lead to rewarding technical vocations?[*]

An alternative view to the one presented above deserves to be recorded. It has been assumed so far that it is better to provide all students with two years of liberating education in as undiluted a form as possible, rather than to encourage students from disadvantaged backgrounds to pick up technical education earlier, specifically during the first two years of college. The reasons for this are: (1) access to higher technical education, and to top business and political positions, tends to require at least two years of liberal arts education; and (2) two years of self-expansion are themselves an asset, which should not be allocated in a discriminatory manner.

However, it might be argued that most disadvantaged students cannot afford such luxury; they may need good incomes right away. Such income can be earned more readily in the semiprofessions (e.g. accounting) which require not an A.A., but only one or two years of technical education. In addition, it is said that one can later advance from lower to higher technical positions (e.g., from nurse's aide to practical nurse) and, by eventually returning to college (maybe in the evening), one may rise still higher (e.g., to become a registered nurse). Hence, early technical orientation for the disadvantaged is favored.

The educational policy favored here is, in part, a matter of normative values, depending upon whether one believes persons of disadvantaged backgrounds need additional income or self-expansion and social "income" more urgently. In part, it is a matter of collecting evidence as to how much additional income is gained by entering the labor market with earlier technical training but no A.A. as compared to later technical training with an A. A. In part, it is a matter of noneducational policy--is it possible to surmount occupational barriers and move up in the world by any other route than further education? These are questions which require additional deliberation and research before they can be answered. In any event, the educational system should not be so structured as to penalize those who choose a different course from that favored by the policy makers; the final decision should be that of the student himself, after he is given as much information as possible about the probable consequences of his decision. We hence recommend that: (1) the necessary information be generated; and (2) that it be made available, in an attractive format, to students (and to their high school and college counselors).

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[*] Some relevant data are included in Appendix B of this section.

7. Compensatory Education and Quality

The relationship between expanding enrollment and educational quality is such that, given existing resources, to rapidly expand admissions--whether the students are white or black or both--will undermine quality of education, unless shortening the length of time required for college education releases some resources, which may then be used to maintain quality.

Opinions vary widely as to what extent students from a disadvantaged background (including lower-class whites) require compensatory education and what its functions and effects ought to be. At one extreme are those who believe that students from disadvantaged backgrounds are just as able to complete college educations as are other students and that they do not require any remedial or compensatory education. At the opposite extreme are those who maintain that the roots of disadvantaged conditions rest in biological differences which no amount or kind of education can eliminate.* Still others hold that while there may be no biological differences between students, those not reached by the time they complete primary school, or high school at the latest, cannot catch up.

The more moderate positions range from those who hold that a limited program--evening classes, for example or a summer's pre-enrollment--will suffice, to those who hold that encompassing and prolonged efforts are necessary. Those who are of this last opinion maintain that even an intensive program will only serve to reduce, but not eliminate the effects of the disadvantaged background. Thus, the optimists put some faith in making the existing educational structure available to disadvantaged students, while the pessimists argue that far-reaching changes in the structure are necessary before it will be accessible to all.

While there are numerous reports and some studies of compensatory higher education, the effects of compensatory education and the kinds of programs needed cannot be specified on the basis of existing empirical evidence. One of the most urgent tasks of those concerned with higher education is to establish, on the basis of experimentation and additional research, which kinds and "how much" compensatory education are needed.

Most of the data which do exist are based not on studies of students drawn from the lower segments of the disadvantaged, but from the upper portions, as measured either in terms of socioeconomic class or on the basis of educational capabilities. This suggests that compensatory education, as a mass tool, may be even more limited in its efficacy than available studies suggest; in order to gain whatever it can give, intensive prolonged programs, as well as structural adaptations, seem necessary.

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*Arthur R. Jensen, 'How Much Can We Boost IQ and Scholastic Achievements?" Harvard Educational Review, Spring, 1969.

Tentatively, we suggest that for compensatory education to be relatively effective the following guidelines must be followed:

a. Programs of compensatory education should start as early as possible. If the high school years have already been missed, pre-enrollment programs of a full year, or at least of one summer preceding entrance into the regular college curriculum, are recommended.

b. Continued supportive education is necessary throughout the entire college curriculum for many disadvantaged students, in the form of additional tutorials, extra sessions to follow regular classes, specific remedial courses, and the like.

c. Financial support is needed for most students in these programs and often for their families. This point is discussed above.

d. Two kinds of counseling are required: academic--for the student to find his way in the academic maze; psychological--to help him overcome the anxiety and tensions generated by participation in the program and in the predominantly white middle class college.

e. "Total programs," in which participants are brought to live on the campus, seem preferable to those which are carried out in the community. However, this particular point requires even more examination than any of the others because there is even less relevant evidence here and because what is available is conflicting.

f. Teaching materials and methods as well as evaluation techniques ought to be modified to take into account the subcultures of the disadvantaged.*

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*For additional discussion see Irene Tinker, "The Response of American Colleges to the Underprepared Students," in Post-Secondary Education and the Disadvantaged: A Policy Study (Washington, D. C. and New York City: Center for Policy Research), 1969.

Even when all this is systematically done by qualified personnel, we expect that a large proportion of disadvantaged students will still be affected by residues of their previous condition upon graduation from college. We must reiterate this point: one should not expect miracles from compensatory education and must learn to support it for what it can do--it can reduce the penalties of the disadvantaged background and thus enhance social justice, but it cannot, by itself, secure it.

The most important factor which determines the effects of compensatory education on the students, the university, and the society at large is the number of students enrolled in the program. A fine program with a few students is interesting to social scientists as an experimental laboratory, and valuable to public relations officers. On the other hand, a program with mass enrollment, even if not of such high equality, may well improve the future of race and class relations in America. In sum, we favor a massive, intensive and prolonged compensatory educational program.

8. Ethnic Studies

The efforts to advance equality of opportunity in higher education will not be complete without adding ethnic studies (black studies, Spanish and others) in one or more of the following forms. They aim at increasing the motivation of those who are members of minority subcultures, and at rounding out the liberating education of the majority who come from an advantaged background.

Ethnic studies may be introduced as:

a. Part of general courses, such as our civilization or on the society. These courses should be devoted to expanding the students' understanding of the pluralistic nature of his society, the fate and contributions of various ethnic groups within it, and changes in inter-ethnic relations. Such courses should be open to all students as a part of their general education.

b. Students who seek additional information on these subjects, as well as those who would internalize the heritage of a specific group, should have access to a set of courses on any one ethnic subculture, for instance African history, African music, and Swahili. As in other areas, it is preferable if these courses make up a relatively coherent program rather then being thrown together more or less randomly.

c. "Majors" in ethnic studies should be allowed, as long as those who take them also share in the general education given to others. Such "majors" would help those from divergent subcultures to find a congenial subculture on the campus and gain a liberal arts education especially slanted to their needs. By applying somewhat lower academic standards, their passage through college may also be eased.

d. Classrooms should not be used for psychotherapy, in the sense of an emotional exercise aimed at overcoming racial or other anxieties. If such therapy is needed, it should be provided as an extra-curricular activity.

e. Disadvantaged students should take "normal" subjects--such as mathematics and English--with other students and not in ethnic programs, to keep a measure of campus integration and to avoid duplication of efforts.

Much more has and can be said on the subject of ethnic studies.*

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*For our views and suggestions, see Section I of Post Secondary Education and the Disadvantaged, op. cit.

Our purpose here is not to investigate such programs in depth, but to record the fact that such an accommodation in the college curriculum and program, within the confines outlined, would help advance equality of opportunity in higher education and should be encouraged.

9. Basic Changes in Context and Structure

The preceding statements in reference to ethnic studies apply even more strongly to the topic of changes in other aspects of the curriculum, teaching methods, and college structure and governance. Numerous books, articles and reports have been written in recent years on these topics. We do not seek here to review these but to tie the subject--the reform of colleges--to equality of opportunity and economy of resources in higher education.

Because the measurement of educational success and relevance is hard to achieve, and consensus on goals is low, we expect to find some tension and some demand for change in any college system. In practice, changing the system becomes a way of preserving it. The pendulum of actual arrangements swings back and forth; the changes release tensions.

There is now, though, a more serious crisis and demand for reform, which is expected to have more lasting effects. In content and structure, the college is still largely geared to a productive society, one in which the production of objects and their consumption is the prime societal function. This orientation is revealed most directly in the programs which students work (prevocational and preprofessional studies), with professionalization of the humanities and the social sciences (which makes them less psychologically expanding and more preparatory to jobs), and in the highly structured nature of most American colleges, which continues high school patterns of regimentation and is designed to prepare students for a role in a corporate structure.

Actually, the society into which the students will graduate will have a growing number and proportion of positions in work dealing more with persons and symbols, and less with objects. Blue collar workers and farmers will decrease, while professionals and semiprofessionals (e.g., social workers and teachers) increase.

> "The professional and technical employees--the most highly educated of all workers--are, in fact, the fastest-growing occupational group in the United States (Table 1). In 1950, almost 5 million persons were employed as professionals and technicians. By 1960, the number rose 50 percent to 7.5 million. And by 1975 they will number 12.3 million, an increase of almost 65 percent.*

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*Daniel Bell, The Reforming of General Education (New York: Doubleday, 1968), pp. 84-85.

"TABLE 1

"Employment by Occupational Groups: 1960 (actual) and 1975 (projected)

	1960	1975	Percent Change, 1960-1975
Total	66,700,000	88,600,000	33 percent
Professional and technical	7,500,000	12,300,000	64
Managers and proprietors	7,100,000	9,600,000	35
Clerical	9,800,000	13,700,000	40
Sales	4,400,000	6,100,000	39
Craftsmen and foremen	8,600,000	11,900,000	38
Operatives (semiskilled)	12,000,000	15,500,000	29
Service workers	8,300,000	11,300,000	36
Laborers	3,700,000	3,800,000	3
Farmers and farm laborers	5,400,000	4,400,000	-18

"These projections, given in absolute figures, mask some important changes. If we examine these figures for relative proportions (Table 2), some interesting perspectives emerge. For one, the semiskilled group, which from 1900 to 1960 went from 12.8 to 18.6 percent to become the largest single group in the labor force, will begin a relative decline. The proportion of laborers will show a sharp decline. Almost all other groups will about hold their own or gain slightly, but as a proportion of the whole the professional and technical groups will show an appreciably sharp rise.

"TABLE 2

"Occupational Distribution of Labor Force as Percent of Total

	1960	1975
Total	100 percent	100 percent
Professional and technical	10.8	13.8
Managers and Proprietors	10.2	10.8
Clerical	14.5	15.2
Sales	6.5	6.8
Craftsmen and foremen	12.9	13.4
Operatives (semiskilled)	18.6	17.5
Service workers	12.6	12.7
Laborers	6.0	4.2
Farmers and farm laborers	7.9	4.9

It is the professional and technical class, therefore, which becomes the base line for future needs--and educational demands--of the society, and the bulk of these are in the scientific, teaching, and health fields.'"*

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*Ibid., p. 85.

These positions are less bureaucratic; e.g., the role of a social worker is less structured than that of a bank teller or assembly line employee, and that of the "intellectual worker" is less rigid than that of civil servant. Also, the society is gradually putting more value on culture, "education," and wise use of leisure, and less on work as such.

Colleges which are future-oriented will increasingly have to develop cultural (and social) skills and the ability to work creatively, without tight supervision. This requires less regimented colleges, more independent study, and more stress on liberating education, with less on an instrumental technical one.

We do not expect a sudden shift, but rather a gradual movement toward a new center of gravity. The new educational balance will still be heavier on the technical side for those colleges which draw primarily from lower strata, because most of those who are not yet part of the affluent society seem to be more driven toward productivity than the students who come from higher strata. But this difference can be expected to decline. And, some of the under class may move directly from the culture of poverty to that of the post-affluent society.

Colleges which are out of step with the evolution of society are likely to continue to alienate their students; those which reform cannot expect an unquestioning, noncritical commitment, but may evolve a bridge to reduce the generation gap.

Reduction in the amount of technical education in the first two years; greater commitment on the side of the students; less fragmentation, fewer highly specialized courses, and more integrated courses; more seminars and independent study; as well as other reforms we need not discuss here, could significantly increase the effectiveness of the two-year education and make up for part of the "loss" due to the shorter education stretch. (To repeat, the other two years are not "eliminated." One will be spent in "educational" national service; for those who continue, the fourth year of their post-secondary education will be devoted to paratechnical preparation, attached to the university or professional school they will attend. See next section for details.)

Finally, the loss in technical preparation resulting from not having the third and fourth year of college may be picked up wholly, or in part, by the first year of graduate school. This would avoid the duplication now frequently occurring, and technical preparation to the specific requirements of the graduate program in which the student will enroll. In general, we find on-the-job training tied to actual performance to be more relevant, more economical, and less alienating, than generalized preparation for an unspecified job. This applies to preparation for graduate studies and, of course, as only a fraction of college graduates enroll in graduate studies, this approach is much more economical than paratechnical work in undergraduate colleges. And, of course, there is little sense in preparing those for graduate school who will not go on to graduate work.

One difficulty in this approach is that some students, mainly those who are more privileged, will continue to enroll in four year colleges, especially private ones. Since these colleges are often part of universities which have graduate schools and which draw many of the most privileged students (this is true for about 200 colleges), it should be relatively easy to move the fourth year (and maybe the third year) administratively from the undergraduate to the graduate division. (Changes of such magnitude have been made in other countries, such as Britain, France and Israel without too many difficulties.) For those who will transfer from four-year colleges to graduate schools, advance standing may be arranged. In toto, the continued existence of several hundred four-year colleges in the twenty-four hundred college system does not seem to present an insurmountable barrier to introducing a two tier system of which two-year liberating colleges would be the first tier and technical, professional and graduate schools, the second one.

APPENDIX III-A

Loans Instead of Fellowships

Suggestions as to how an individual may finance his higher education have lately been made in large number. They include many more proposals for new approaches to this problem than studies of the merits and deficiencies of existing systems. We do not wish to add to the welter of new models but seek to build on an existing system. It is our key recommendation that federal support to undergraduate education, and possibly to all graduate education (with a few exceptions such as categorical support, for study of the Chinese language, for example) be made in the form of loans and not fellowships. A system is envisioned in which fellowships are rare and loans take the predominant place now held by fellowships. The loans would be interest free for the student as long as he is in school and until his postgraduate income reaches a specific level. Once it surpasses this level, he would be required to begin repayment and to pay interest on the outstanding balance. This means, to put it bluntly, that for students and for those graduates who are not well off, the system will function as a gift (or fellowship) system, but for those who graduate and do well, it will merely defer their college payments until the day they can easily afford to make them. The funds attained by repayments will be used to finance future loans.

The suggested scheme requires many additional specifications: at what income level will repayments start? What rate of interest will be charged? etc. We are interested here only in spelling out certain essential features. First, it would be based on the principle of a *differential* system. Every system of government payments not directly related to taxation transfers income in one of two basic ways. One is *universal*: the payments are extended to all the members of a demographic or occupational category irregardless of their *economic* status. Social security is a example. *Differential* schemes pay out different amounts to members of the same unit, with the amount of benefits tied to their economic status. Welfare payments are a case in point. By and large, universal systems are considered more politically appealing because "everyone" gets something. However, they are also very expensive, a political disadvantage. And, their payoff is often largely off target and provides assistance to the affluent as well as the needy.

Most palatable is a system which mixes the two, by having some universal and some differential features. For instance, a family allowance per se is universal; everyone--poor and rich--gets it. But if we add the stipulation that income from this source is taxable, everyone will still receive it, but the poor will retain all of it, the middle classes--some, and the rich--relatively little. Thus, the net costs of the program are reduced but not popular support, as would be apt to occur with a purely differential system.

A broad system of student loans, available to all, could be established with a differential pay-back feature as suggested above. This would enhance public support for the system, without requiring the bestowing of gifts on the rich, who neither need nor seek them.

This system would be much less expensive in the long run than one granting universal fellowships, because funds would start to flow back within a few years after it was initiated. The sums involved are large. Although the view that the public could, if it wished, pay for any new program with what it now spends on liquor, cigarettes, defense and the moon, may be correct in abstract moral terms, even if we would somehow stop smoking and drinking, this money would not be available to public consumption. The total costs of the space program are below the sums needed here; defense costs are unlikely to decline sufficiently; and there are scores of other domestic programs which need funding. Concern with costs is hence not a conservative "hang-up" but an essential component of any realistic societal programming.

A second essential consideration is that of availability of funds. At the present--as the following report shows--student loan funds are made available largely by banks, who tend to prefer their old customers, with the states acting as the guarantors and the federal government covering part of the costs. The system could be simplified and made more equitable in several ways. We prefer turning the whole matter over to an Educational Opportunities Bank, to be created especially for this purpose by the banking industry in collaboration with the federal government. But other arrangements may do as well. What is essential is (1) to simplify lending procedures; (2) to increase the banks' incentive for granting student loans; (3) to make sufficient funds available that all who seek a loan, within the limits of time and amounts agreed upon, could be supported. (We would differentiate amounts, by income, as set forth above).

Finally, and most important, is the question of access. As students from lower class and minority backgrounds are apt to be fearful of approaching a bank and taking out a loan, ways must be found to ease this process.

Perhaps loans could be made available at both home town and college banks, with the financial aid officers of the campus acting as go-betweens for the students and the banks.

* * * * * * *

We add the following brief report, prepared by one of our graduate students:

The Low Interest Student Loan Program, 1965-69*

The Higher Education Act of 1965 set up a program of guaranteed, low interest student loans. According to the original provisions, individual banks were to serve as lenders, with state agencies guaranteeing the loans against default. The amount which could be lent to an undergraduate each year was $1,000 while graduate students could receive $1,500; for both, the overall limit was set at $7,500. Repayment was to be over a period of ten years. The government would pay the interest (6%) while the student was in school; after graduation, the student would repay the principle plus 3 per cent interest, with the federal government paying the additional 3 per cent.

Several amendments have been made to increase the attractiveness and availability of the loans. In 1968, the allowable interest rate was raised to 7 per cent, with the student paying 4 per cent interest. Additional kinds of institutions have been permitted to make the loans. In October of 1968, Congress allowed pension funds and savings and loan institutions to make guaranteed loans for the first time, and in January of 1969, out-of-state students were allowed to obtain federally insured loans from the educational institutions where they were in residence. Another change was the addition in 1968 of a reinsurance provision whereby the federal government will pay the state loan agencies 80 per cent of the amount due lenders when a loan goes into default. Thus, these agencies can now guarantee five times the amount they could previously insure.

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*Various issues of the Chronicle of Higher Education provided the information contained in this report.

Even so, the program has not provided the amount of support to students in higher education than was originally anticipated. The total amount of new loans which could have been made under this program during its first year of operation was $700,000,000 and for the year ending June 1968, $1,400,000,000. Yet only $640,000,000 was lent in the year ending June 1969, the program's biggest year to date. The difficulties which have beset the low interest student loan program are of several kinds. First, the rights of the parties involved--i.e., what the borrowers, lenders, and state agencies could expect from each other and the federal government--were not adequately specified in the original legislation. A more serious difficulty is inherent in the way the program is related to the national economy.

The program and the state of the money market.--The wellbeing of the loan program has been tied, from its beginning, to the state of health of the money market. It has depended heavily on the willingness of commercial bankers to extend low interest credit over a long period of time. As early as December of 1966, the American Bankers' Association was asking the government to increase the 6 per cent interest rate and to remove the statutory ceiling on the interest rate. In February of 1967, the American

Council on Education stated that the government had to introduce "sufficient flexibility in interest rates to enable lenders to provide funds for the program at least on a break-even basis."

Initially, attempts were made to offer incentives other than changing the original provision of the 6 per cent interest rate. A plan suggested by then Secretary of Health, Education, and Welfare, John W. Gardner, was one that was considered as a possible solution. He suggested that a $35 fee be paid by the government to the banks for each student loan processed, and that another $35 be paid when the student began his repayment. Instead, in May of 1968, Congress increased the interest rate on the loans from 6 per cent to 7 per cent. Yet in June of the following year, the major banks increased the prime lending rate from 7-1/2 per cent to a record 8-1/2 per cent. This increase constituted a crisis, since it was feared that the banks would not make loans during the peak demand months of August and September. Subsequently, emergency legislation was introduced in both the House and the Senate to keep private lenders from withholding loans; under these bills, the government would provide private lenders with interest subsidies of up to 3 per cent to keep their return rate above the prime interest rate. The bill was finally passed in mid-October. As the preceding illustrates, the program has continually been on the verge of a crisis because of its dependence on the money market and on the good will of the bankers.

The present relief seems temporary. The bankers are now pressing for the establishment of a secondary money market, which would permit lenders to sell the student loans to an agency like the Federal National Mortgage Association. The bankers have agreed that a "secondary market mechanism is needed because the insured loan program ties up substantial sums of money for long periods of time without much profit." The program's basic problem is to ascertain what incentives are necessary to induce the banks to loan large sums of capital over long periods of time in an increasingly tight money market.

The students and the loans.--Another difficulty arises from a lack of specification of the loan's recipients. In the original bill, there are no stipulations as to which students are eligible for loans. The major aim of the program was to aid middle-income families, since the NDEA loans, college work-study and educational opportunity programs are designed to aid the needy. As of December, 1966, 58 per cent of the loans went to middle income students ($8,000-14,000 and up), and as of January, 1968, in figures prepared by Joseph Froomkin, Assistant Commissioner for Program Planning and Evaluation at H.E.W., one can see that middle income students utilize the guaranteed student loan program to a far greater degree than the other three programs. Subscription to the three other programs increases with a decrease in family income. However, in March of 1969, Froomkin found that two-thirds of the money was going to students whose parents earned less than $12,000 a year, a shift from the earlier pattern.

The program has met with strong opposition from college financial aid officers, who award loans on the basis of need. There have been fears of duplication of awards and indecision as to what limits are to be applied to the awarding of college funds if a guaranteed loan is obtained. The College Entrance Exam Board, while endorsing the program, has raised the issue of distinguishing between "loans of necessity," for which the government would pay interest, and "loans of accommodation," which the government would guarantee but not subsidize. This same feeling that some discrimination should be made on the basis of financial need is also revealed in a private survey undertaken by the Board; they found that lenders were using need as one criterion of deciding who should get the loans.

Another problem arises from the fact that the lender can reject the loan request on any number of bases, which are not subject to control. As Robert Jacobson notes, "There is nothing in the law that says he the lender must grant a loan to any student if he doesn't want to." One type of discrimination has been the unwillingness of banks to lend money to noncustomers. In a compromise version of the Emergency Education Bill of 1969, the Secretary of Health, Education, and Welfare was directed to determine whether lending agencies actually discriminated in this way; furthermore, he would be empowered "to take remedial steps if he found a substantial number of students were being denied a fair opportunity to obtain loans." The Secretary is due to make his report in May, 1970. As the act now stands, loans could be denied on the basis of race or other extraneous factors which make the borrower seem to be a bad risk.

The state loan agencies and the government.--Further difficulties arise from the unclear relationship of the role that the federal government is to play vis-à-vis the state agencies that are the prime guarantors. According to the act, in addition to the interest payments, the federal government provides only the procedures by which the loans may be guaranteed, together with some reserve funds to back them. In an address at the A.B.A.'s Washington Conference in 1966, Peter P. Muirhead, then Associate U.S. Commissioner for Higher Education, stressed the primacy of the states' role in operating the program. However, in August, 1967, the U.S. Office of Education moved to guarantee loans in North Dakota after state agency funds for guaranteeing the loans were depleted. The funds of Hawaii, Colorado, Maine, and Indiana were also on the brink of depletion at that time. By March, 1968, the federal government was running the program in nineteen states, although spokesmen for the Administration were still vowing that they wanted the states to be self-sufficient in this matter. However, the facts seem to indicate that almost two-fifths of the state agencies are incapable of supporting the program.

This inability to run the program at the state level poses serious problems in light of the stands taken by both the Johnson and Nixon Administrations. Johnson had intended to "phase-out" the direct loan program, and consistently supported the program. In his education message to Congress in March, 1967, he called it "an example of creative cooperation between the federal government, the states, the financial institutions, and the academic community." The program has also received support from the Nixon administration, since it requires the least direct expenditure of government funds. Yet, the question remains of what is to be done if programs such as NDEA are cut back, while the states are unable to fulfill their function as guarantors. The answer seems to be higher government expenditures to provide seed money and reserves on which the states could depend. However, the dependence of the program on the fortunes of the money market and its resulting instability are yet to be resolved.

APPENDIX III-B

Some Data on Black Preferences in College Programs

To ascertain the differences between the educational choices and academic aspirations of black and white students, we have composed the following tables, using material provided by Bayer and Boruch in their survey on black students in American colleges.[*] Their sample included both black and white students, and, in their words, consisted ". . . of all 'eligible' institutions of higher education listed by the Office of Education in its annual Education Directory. . . . Consequently, the national norms are based on data provided by approximately 243,000 freshmen at 358 institutions."[*]

It is clear from these data that, regardless of type of institution, a greater proportion of black than white students plan to follow their studies past the baccalaureate level, this tendency being somewhat stronger among those attending four-year colleges. This pattern changes in regard to professional degrees; here the differences between the two groups are extremely small.

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[*] Alan E. Bayer and Robert F. Boruch, The Black Student in American Colleges, American Council on Education, Office of Research, Washington, D. C., volume 4, number 2, 1969.

[*] Ibid., pp. 8-9.

TABLE III-B-1

DIFFERENCES[*] BETWEEN BLACK AND WHITE STUDENTS AS TO HIGHEST DEGREE PLANNED, ACCORDING TO TYPE OF EDUCATIONAL INSTITUTION[**]

(In Percentages)

	Difference		
	Two-Year Colleges[***]	Four-Year Colleges	Universities
None	+0.1	- 0.3	+1.5
Associate (or equivalent)	-3.5	- 0.2	+0.2
Bachelor Degree (B.A., B.S.)	-4.4	-10.4	-7.0
Masters Degree (M.A., M.S.)	+6.0	+11.5	+4.2
Ph.D. or Ed.D.	+2.9	+ 8.1	+4.4
M.D., D.D.S., or D.V.M.	-0.4	- 0.4	-2.3
LL.B. or J.D.	-0.4	- 0.1	-1.0
B.D.	-0.1	+ 0.2	+0.2
Other	-0.2	- 0.2	-0.2

[*] The sign (+) is used to indicate a greater percentage of black students choosing the given item.

[**] Each institution is predominantly white, since the responses of black students within predominantly black colleges have been excluded.

[***] Source: Ibid., p. 42.

The differences between the two groups in regard to choices of undergraduate major are brought out in the following table.

TABLE III-B-2

DIFFERENCES* BETWEEN BLACK AND WHITE STUDENTS AS TO PREFERRED MAJOR FIELD OF STUDY, ACCORDING TO TYPE OF INSTITUTION**

(In Percentages)

	Difference		
	Two-Year Colleges***	Four-Year Colleges	Universities
Agriculture (including forestry)	-3.8	-0.7	-1.8
Biological sciences	-0.7	-0.2	-0.5
Business	+3.6	+3.8	+3.2
Education	+0.1	-0.5	+3.5
Engineering	-2.8	-3.7	-5.3
English	-0.9	-0.8	-1.1
Health professions (non-M.D.)	+6.8	+2.3	+3.8
History, political science	-0.9	+0.8	-0.4
Humanities (other)	-0.3	-2.1	-1.8
Fine arts	-1.0	-2.3	-0.9
Mathematics or statistics	-0.3	-1.0	-0.7
Physical sciences	-0.7	-0.6	-1.7
Preprofessional	-1.3	-0.4	-2.0
Psychology, sociology, anthropology	+4.1	+6.6	+5.6
Other fields (technical)	-0.6	-0.6	0.0
Other fields (nontechnical)	-0.8	+0.1	-0.7
Undecided	-0.6	-1.0	-0.9

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*The sign (+) is used to indicate a greater percentage of black students choosing the given item.

**Each institution is predominantly white, since the responses of black students within predominantly black colleges have been excluded.

***Source: Ibid., p. 42.

Again we see that there are only insignificant differences between the three types of institutions. The differences between black and white students are only somewhat greater, and show that a larger proportion of black than white students choose business, health professions (non-M.D.), and the social sciences, while greater proportions of white students choose agriculture and engineering. The differences in regard to the other fields of study are even smaller, and therefore are held to be not relevant.

IV. INCREASING THE SEPARATION OF TEACHING FROM RESEARCH

To protect college teaching from further encroachments by research, we recommend:

1. that the majority of institutions of higher education in the U.S.A. be designated as teaching colleges and that measures be taken to encourage them to accept teaching as more or less their exclusive mission (not excluding service to the community which takes instructional form), and to discourage them from conducting research;

2. that the development of research corporations off campus be encouraged and that certain kinds of research (specified below) be transferred from the campus to these corporations;

3. that a minority (less than 10%) of American institutions of higher education be designated as research universities in which research (especially basic research) and research training (in graduate schools) will be the chief mission.

For reasons spelled out below, it may be necessary in some cases, or even desirable, to have a teaching college, a research university, and even a research corporation on the same site and permit the easy movement of staff, students, and books from one to the other. However, we suggest that the distinctive identity and functions of each unit be emphasized and the different needs and requirements of the varied missions be openly recognized.

We would like to stress that our recommendations, which may seem to require far-reaching changes in the structure of American higher education, only seek to explicate, legitimate, advance and extend divisions and trends already evident. For instance, most colleges, in effect, do very little research and most campus based research is conducted in less than 10 per cent of the institutions of higher education. (For some evidence, see section B following.)

Second, we do not expect the federal government to decree, let alone force, colleges to act in the desired way. But a federal role is anticipated in explicating the logic involved, helping colleges to come to recognize it, and in financing developments which would further these goals, developments that are economical and in line with the needs of the national system of higher education. Individual colleges are apt to focus primarily on their own needs and it may be necessary for a federal authority to encourage them to widen their scope and have a greater regard for national goals.

To clarify why we favor the separation of research from teaching and of some forms of research from universities, we turn first to organizational theory for some observations on the relative effectiveness of single purpose and multipurpose organizations. Consideration of some of the problems found in multipurpose organizations will be of particular interest as it helps to illuminate many of the recent criticisms of higher education and suggests, in part, why the separation into distinct institutions of the various functions currently handled by higher education is a step toward remedying the observed problems.

A. An Input from Organizational Theory

The conditions under which it is both more effective and more efficient[*] to service two or more "functions" by one structure instead of two or more separate ones is a complex subject, one which is explored at length in organizational literature.[*] No general agreement has been reached as to which arrangement is preferable although several valid points have emerged that are relevant to the discussion at hand.

First, it seems[*] that multipurpose structures tend to be better at serving all purposes than monopurpose structures are in serving any. Thus, hospitals which teach, conduct research, and provide therapy, seem to provide, on the average, better therapy than those which provide only therapy. They also, in general, seem to carry out better research than units which specialize in medical research. Finally, teaching medicine without a therapy unit is almost inconceivable. Similarly, the universities which are major centers of research and of teaching seem to carry out better research, on the average, than research corporations and to provide better teaching than most teaching-only colleges.

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[*] By "effective" we mean the extent to which a goal is realized; "efficient" refers to the cost per unit of output. An efficient process may be ineffectual, as when it costs little per unit but also little gets done. An effective process may be inefficient, as when goals are realized but at a high cost per unit.

[*] For a previous discussion by this author, see Amitai Etzioni, Modern Organizations (Englewood Cliffs, New Jersey: Prentice Hall, 1964).

[*] We repeatedly use the word "seems" to stress that these generalizations are based on inconclusive evidence.

The correlation of effectiveness with multipurpose structure is partly a spurious one resulting from the fact that multipurpose organizations are more often located in major metropolitan areas while monopurpose organizations tend to be in smaller cities and towns. Large cities are more attractive to professionals, which enhances the quality of the staff and therefore the multifacet effectiveness of these organizations. But, when this factor is controlled by comparing multipurpose with monopurpose organizations in the same environment, e.g., Manhattan, the relationship seems to hold. Probably, it is due to the mutual enrichment of the several services. Multipurpose organizations can, for example, use patients who come to the hospital for therapy for in teaching purposes, as well as reassign staff from one area to another--switch "dried up" researchers, for instance, to teaching duties.

However, all multipurpose structures face a common difficulty--namely, to establish and maintain the desired balance among the various specialized divisions which serve different goals. There is a strong tendency for one of the divisions, and hence one of the goals, to prevail and absorb ever more of the resources and energy of the total organizational pool. Many observers have suggested that precisely this process underlies many of higher education's current problems. The teaching mission of colleges and universities is seen as increasingly overshadowed and thwarted by the growing importance of research activities. Major universities, in particular, are committed to research and it is here that teaching suffers most. Professors, are often more committed to research than to instruction, and bargain for lighter teaching loads, while graduate students, often themselves mainly concerned with their doctoral research, fill in as teachers of the "sections" of introductory courses. "Vast numbers of students, huge classes, intense competition for Federal funds and therefore for distinguished research professors, political and professional pressures, all these have operated to downgrade and even discredit teaching."*

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*William Arrowsmith, "The Future of Teaching," Improving College Teaching, Calvin B. T. Lee, ed. (Washington: American Council on Education, 1967), p. 68.

Teaching in liberal arts colleges has also been thoroughly criticized and, again, the faculty's concern with research and publication is often seen as the fundamental problem.

> . . . It is hard to imagine a more damningly documented indictment of the liberal arts college than that of the Jacob study,* with its

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*Philip E. Jacob, Changing Values in College: An Exploratory Study of The Impact of College Teaching (New York: Harper and Row, 1958).

> bleak conclusion that, apart from three or four colleges, the effect of college teaching on student values is simply nil, zero, and that what small change occurs comes from the student subculture. The conclusion is the more devastating because it is precisely on the claim to *teach* that the American college stakes its case. . . . In my opinion, the colleges have failed as teaching institutions because they have been subverted from within. They have recruited their faculties heavily from the major graduate institutions, and these recruits have inevitably altered the tone and finally the function of the colleges. . . . Gentility and snobbery have played a large part in this subversion, as well as the hunger for academic respectability which is now firmly linked to the business of research.*

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*Arrowsmith, op. cit., pp. 65-66.

The point in time when the expansion of academic research began to interfere with college teaching can be set with fair precision. A fair balance seems to have existed between teaching and research in the American system of higher education until 1953; at least, so it seems in retrospect.

Then, a rapid increase in national, and above all Federal, expenditures on research and development tipped the scales. Before that time, Federal expenditures for research and development paralleled increases in the Federal budget; they have outpaced it since. The period from 1957 to 1963 has been characterized as "in some ways the most explosive in the history of Federal expenditures for research and development."* A significant proportion of this new money has gone into academia. Here it has caused the imbalances between academic missions discussed above, both directly at the major universities, and derivatively at the smaller universities and throughout the four year colleges.

Since institutional separation of services is the most useful counter for precisely this danger--the growing predominance of one among several missions--increased separation among the varied missions now performed in universities and colleges seems desirable. Even so, while a greater degree of institutional separation is needed between teaching and the various types of research in order to reduce the disruptions generated by the overemphasis on research, the benefits of multipurpose combinations should also be preserved. One way this may be achieved is by greater segregation on the same site, of units which serve primarily different missions, e.g., the teaching college and the research university.

B. Differential Scope of the Missions

In pursuing this subject further we must take into account that the national needs for research and higher education are not equal in scope.

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*National Science Foundation, Federal Funds for Science XI, Surveys of Science Resources Series, NSF 63-11 (Washington: U. S. Government Printing Office, 1963), p. 50.

If measured in dollars and cents, universities provide about $922 millions worth of research for the government, their major "client,"* while the education they provide costs over ten billion dollars. If measured in manpower terms, about 6.5 million students are educated each year, but in 1970 only 29,000 Ph.D.'s will be produced, only about half of whom will do research. (To these an unknown number of researchers without a degree should be added.) Moreover, the majority of the nation's 2300 institutions of higher education do very little research. In terms of research budget provided by the federal government it was estimated in 1965 that six universities received 57 per cent of the funds, and twenty received 79 per cent of the funds.* The distribution of the major portion of this money is shown in Table IV-1.

It is impossible to link up in any meaningful way the teaching colleges to the research universities, as these are spread all over. Developing many more research universities to serve as incoming points to these colleges would be unnecessarily costly, as the nation seems not to need so much more research and because the research conducted by these aspirant institutions seems, on the average, much inferior to that provided by existing centers. Studies of the quality of research, as measured by the number of references to a published report in subsequent publications, have indicated that individuals producing widely cited research are most likely to be

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*New York Times, December 16, 1969.

*Kenneth W. Thompson, "Science and Public Policy: Guides from Abroad," Science and the University, Boyd R. Keenan, ed. (New York: Columbia University Press, 1966), p. 31.

TABLE IV-1*

Alphabetical List of 100 Universities and Colleges Receiving Largest Amounts of Federal Obligations in Total, Academic Science, or R. & D. Funds, 1966

INSTITUTION	STATE	RANK ORDER		
		TOTAL FEDERAL	ACADEMIC SCIENCE	R. & D.
Alabama, University of	Alabama	68	76	72
Alaska, University of	Alaska	100	--------	76
Arizona, University of	Arizona	36	[illegible]	47
Arkansas, University of	Arkansas	75	73	81
Auburn University	Alabama	79	86	95
Baylor University	Texas	73	63	50
Boston University	Massachusetts	63	66	94
Brandeis University	do	--------	--------	93
Brown University	Rhode Island	47	45	38
California, University of:				
Berkeley	California	8	8	8
Davis	do	56	47	52
Los Angeles	do	7	6	5
San Diego	do	37	26	19
San Francisco	do	58	44	35
Santa Barbara	do	92	--------	-------
California Institute of Technology.	do	53	38	25
Carnegie Institute of Technology.	Pennsylvania	89	83	59
Case Institute of Technology.	Ohio	90	78	73
Chicago, University of	Illinois	9	9	9
Cincinnati, University of	Ohio	64	62	78
Colorado State University	Colorado	84	79	71
Colorado, University of	do	38	32	33
Columbia University	New York	4	4	4
Connecticut, University of	Connecticut	67	58	97
Cornell University	New York	18	12	12
Dartmouth College	New Hampshire.	--------	--------	98
Dayton, University of	Ohio	--------	--------	86
Denver, University of	Colorado	88	77	60
Duke University	North Carolina.	28	22	30
Emory University	Georgia	83	75	75
Florida State University	Florida	77	68	69
Florida, University of	do	25	20	32
George Washington University.	District of Columbia.	76	69	58
Georgetown University	do	45	87	90
Georgia, University of	Georgia	57	55	70
Georgia Institute of Technology.	do	--------	--------	99
Harvard University	Massachusetts.	6	7	7
Hawaii, University of	Hawaii	42	52	41
Howard University	District of Columbia.	44	--------	-------
Illinois, University of	Illinois	5	5	6
Illinois Institute of Technology.	do	--------	97	-------
Indiana, University of	Indiana	23	48	42
Iowa State University of Science & Technology.	Iowa	69	85	63
Iowa, University of	do	62	51	48
Johns Hopkins University	Maryland	19	17	16
Kansas State University of Agriculture & Applied Science.	Kansas	--------	96	-------
Kansas, University of	do	59	54	64
Kentucky, University of	Kentucky	61	59	65
Louisiana State University & Agricultural & Mechanical College.	Louisiana	49	46	51
Louisville, University of	Kentucky	43	72	-------
Loyola University	Illinois	81	--------	-------
Maryland, University of	Maryland	30	25	21
Massachusetts, University of.	Massachusetts	86	98	-------
Massachusetts Institute of Technology.	do	2	1	1
Miami, University of	Florida	55	57	37
Michigan State University	Michigan	32	33	39
Michigan, University of	do	1	2	2
Minnesota, University of: Minneapolis/St. Paul.	Minnesota	16	14	17
Mississippi State University.	Mississippi	93	94	-------
Missouri, University of	Missouri	22	36	57
Nebraska, University of	Nebraska	40	71	88
New Mexico, University of	New Mexico	--------	--------	96
New Mexico State University.	do	99	92	84
New York at Buffalo, State University of.	New York	87	80	68
New York Medical College	do	80	93	80
New York University	do	14	16	13
North Carolina, University of:				
Chapel Hill	North Carolina.	27	39	43
Raleigh	do	54	40	46
Northwestern University	Illinois	34	31	26
Notre Dame, University of	Indiana	97	85	100
Ohio State University	Ohio	10	19	20
Oklahoma, University of	Oklahoma	78	70	82
Oklahoma State University of Agriculture & Applied Science	do	85	89	91
Oregon, University of	Oregon	52	50	53
Oregon State University	do	65	61	56
Pennsylvania, University of.	Pennsylvania	11	10	10
Pennsylvania State University.	do	15	28	34
Pittsburgh, University of	do	26	23	24
Polytechnic Institute of Brooklyn.	New York	82	81	66
Princeton University	New Jersey	50	41	29
Purdue University	Indiana	24	24	22
Puerto Rico, University of	Puerto Rico	51	56	77
Rensselaer Polytechnic Institute.	New York	--------	100	87
Rice University	Texas	91	82	61
Rochester, University of	New York	29	27	27
Rockefeller University	do	--------	--------	79
Rutgers, The State University.	New Jersey	35	34	36
Southern California, University of.	California	31	29	28
Southern Illinois University.	Illinois	94	--------	-------
Stanford University	California	3	3	3
St. Louis University	Missouri	--------	95	-------
Syracuse University	New York	66	60	49
Temple University	Pennsylvania	98	91	83
Tennessee, University of	Tennessee	33	43	44
Texas A&M University	Texas	60	53	67
Texas, University of	do	13	13	15
Tufts University	Massachusetts	95	88	85
Tulane University	Louisiana	48	37	45
Utah, University of	Utah	41	49	54
Vanderbilt University	Tennessee	71	64	55
Virginia, University of	Virginia	72	67	62
Virginia Poltechnic Institute.	do	--------	99	-------
Washington University	Missouri	21	21	23
Washington, University of	Washington	17	15	14
Washington State University.	do	96	90	89
Wayne State University	Michigan	70	74	74
West Virginia University	West Virginia	74	84	92
Western Reserve University.	Ohio	46	35	40
Wisconsin, University of: Madison.	Wisconsin	12	11	11
Yale University	Connecticut	20	18	18
Yeshiva University	New York	39	30	31

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*Source: National Science Foundation, Federal Support to Universities and Colleges, Fiscal Years 1963-66, NSF 67-14, (Washington, D. C.: U. S. Government Printing Office, 1967), p. 137.

located in established, prestigious institutions.[*] Hence a two-tier system seems desirable: (1) a massive, teaching-only college system, which will not provide the same quality of teaching multipurpose campuses will provide, but which will provide the major portion of undergraduate instruction; (2) multipurpose academic cities within which teaching will be more protected. The rationale for the latter arrangement is best seen in a historical perspective. Of the greatly increased Federal funds provided for academic research during and after the 1950's a very high proportion went to the top 20 universities. Here it caused the imbalances which are often discussed.[*] Now the time is ripe for a correction in university operations, and this correction is relatively easier to achieve than the improvement of collegiate teaching because the problem was originally introduced quite directly by the Federal government with little conception of the side effects or of the structural alternatives which may have been developed for the new mass research. What is needed now is to somewhat increase the structural separation of research and teaching in the major universities without losing the benefits of the cross-fertilization and, at the same time, to free college instruction from a disabling tie to research.

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[*] Stephen Cole and Jonathan R. Cole, "Scientific Output and Recognition: A Study in The Operation of The Reward System in Science," *American Sociological Review*, 32 (1967), p. 386.

[*] For a series of such discussions see Boyd R. Keenan, ed., *Science and the University* (New York: Columbia University Press, 1966), and Calvin B. T. Lee, ed., *Improving College Teaching* (Washington: American Council on Education, 1967), pp. 12-44.

C. The Modes of Partial Separation

The steps which may be taken toward the goal of separation of research and teaching differ for different parts of the system. The devotion to teaching of most two and four year colleges should be emphasized, recognized and rewarded in every possible way. It should remain their first, second and third priority. The proliferation of small M.A. and Ph.D. programs at such schools should be discouraged if not disallowed. From 1940 to 1958 the number of institutions awarding the doctorate rose from about 100 to 175 and the number giving the Master's degree rose from approximately 300 to 569.*

These small, newer, programs tend to be uneconomical, and poor in quality. Most of the research conducted is of the "busy-work" kind. Above all, the small graduate programs provide the wrong symbolism; the faculties of these colleges should not seek to emulate those of the major research mills and Ph.D. granting institutions.

The differentiation of identities and expectations can be advanced if we learn to distinguish between teaching colleges and research universities instead of referring to all colleges and universities as if they were of one type and therefore by implication subjecting them to the same demands and norms. Different rules, modes of organization, financing and rewards should be built up for the two types.

A fundamental requirement for safeguarding the quality of college teaching from incursions by the demands of research is that it be clearly perceived by college teachers that their participation in the formal rewards of the career they have chosen will depend finally upon their achievements in the classroom. (Research could then be viewed as an entirely supportive and optional activity, engaged in only if such activity does, in fact, significantly advance the individual's performance as a teacher.) In colleges, little or no recognition should be given for research (publications); effective teaching should be the main basis upon which formal rewards (e.g., salary increases, promotions, tenure) are allocated. This arrangement would clearly require an adequate means of evaluating teaching. Accordingly, the prospects for devising a technique of this sort will now be considered; it should be recognized that this discussion is only to determine if such an evaluation of teaching is inherently invalid or unreliable and thus might prevent the development of a competitive career path in colleges based upon competence in teaching.

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*Bernard Berelson, Graduate Education in The United States (New York: McGraw-Hill Book Co., Inc., 1960), p. 35.

The fact that there are no widely accepted procedures to evaluate teaching indicates both the difficulty of doing so, and the lack of commitment heretofore to the development of such techniques. A review of the discussions of the possibility of evaluating college teaching indicate that until recently there has been relatively little experimentation in the area and that current efforts are characterized by perplexity about evaluative processes. Still, there seem to be enough alternate approaches to the problem that it should be possible to evolve a widely acceptable and relatively reliable and valid approach to the task. This conclusion is suggested by two observations. First, it has been found possible to manage the roughly parallel, although partially dissimilar, problem of evaluating student learning. And, previous efforts seem to have been limited by faculty inhibitions which are currently giving way to widespread and growing concern with the quality of college and university teaching.

Commentators on the scarcity of formal attempts to evaluate college instruction have attributed this lapse in analytic interest to a variety of factors. Neill Megaw provides an inclusive framework for considering such causes when he suggests that motives which would generally be viewed both as honorable and as ignoble are involved.* The more honorable of the perceived academic hesitancies concerning formal evaluation of instruction are, in a sense, the more difficult to come to terms with. These are the suggestions that what occurs in the classroom and particularly the most valuable aspects of instruction are too complex, personal, and ineffable to be measured in any formal manner. It is suggested that academics in general "would rather have the rich though undefined experience than a definition of it which will then serve as the model for a much reduced experience."* While the argument suggests a basic and difficult problem, particularly with regard to determining instances of what is recognized, however vaguely, as good teaching, the considerable number of criticisms of college, and particularly university teaching, still suggest the equity, in general, of increasing the extent to which college instruction is accorded some form of organized, critical consideration.

In the latter, or "ignoble," category of factors retarding academic interest in the evaluation of teaching, fear and laziness are considered:

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*Neill Megaw, "The Dynamics of Evaluation," in Calvin B. T. Lee, ed., Improving College Teaching (Washington: American Council on Education, 1967), pp. 282-285.

*Ibid., p. 283.

not the fear of being found incompetent, but rather "a competitive nervousness about one's ranking in relation to one's rivals," and not an ordinary laziness, but rather "a special laziness of the experimental spirit: reluctance, in short, to consider new patterns of overwork." These motivations are viewed as "unheroic feelings, certainly. But understandable, and strong beyond dispute." Since these, and similar, motivations may be presumed to be endemic in most occupational spheres, including teaching, the necessity of developing any scheme of instructional evaluation in a manner that will take account of them is evident.

A recent rise in concern with the quality of college instruction has led to the consideration, and occasional implementation, of a number of evaluation schemes. While a 1966 survey by the ACE indicated that a large majority of American colleges and universities use only rather informal and impressionistic means of evaluating instruction, it did indicate that a considerable number of different evaluational techniques existed and were in use at various institutions.*

A list of the 15 most utilized sources of information on teacher performance included--in addition to the widely used informal evaluation of an instructor by his colleagues, departmental chairman, and dean--the examination of grade distributions, course syllabi and examinations, student examination performance, enrollment in elective courses, student evaluations, and the visiting of classrooms.

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*Alexander W. Astin and Calvin B. T. Lee, "Current Practices in The Evaluation and Training of College Teachers," in Calvin B. T. Lee, ed., Improving College Teaching (Washington: American Council on Education, 1967), pp. 296-311.

One commentator, who is skeptical of the validity of objective--hence, relatively economical--indicators of teaching effectiveness has suggested that an investment of the extent of 3 per cent of a college's total faculty salary costs might permit the development of a permanent faculty committee for evaluation able to largely overcome the major problems reviewed above. "To ensure faculty confidence in its competence, impartiality, and tact, such a committee would need to be faculty-elected and large enough to provide repeated observations by a number of visitors."[*]

It is suggested that in an institution with a faculty of 300, a 27 member committee devoting one-third time to evaluative activities would possess sufficient resources to provide a just and useful evaluation service. The committee is seen not as centrally contributing to decisions about salaries or tenure. Rather,

> Its most important suggestions might be for changes of teaching assignments, leaves for refresher studies or for the development of new courses, early or delayed retirement and changes in the curriculum or in conditions or methods of study at the institution.[*]

While it is difficult to see how the opinions of a committee devoted to the teaching performance of an individual employed as an instructor could fail to be related in some fashion to decisions about salary and tenure, still the elective nature of the committee, its familiarity with the problems and concerns of an instructor, and its formal separation from such decisions should serve to increase its acceptability and utility.

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[*] _Ibid_., p. 285.

[*] _Ibid_.

Other methods may be devised and are urgently needed. Studies of their reliability and effects are strongly recommended. A few individual faculty members may quit four year colleges under these circumstances; many more would be relieved at not having to try to live up to a norm emphasizing research and publication that they find it difficult to adhere to. However, as the rising idealism of the young will very likely provide more faculty truly committed to teaching, the development of evaluative methods should not increase the difficulty of staffing the teaching colleges.

One of the major supports of the current academic pressure for research and publication is institutional and individual competition for prestige. Since a college's prestige depends to a considerable extent on how widely known its faculty is, and since this is largely the result of publication, academic pressure for research and publication is built in to the system. It is, however, possible to imagine the transfer of at least part of this form of individual and institutional competition from research into teaching. While an individual's activities and name have traditionally been disseminated by published research, and his teaching reached a much smaller audience both in time and space, the adoption of taped, televised lectures by instructors might serve to duplicate the renown-spreading function of documentary publication. Thus, it is possible to envision a series of local, state, and national markets for taped lectures that would establish individual and institutional prestige through published teaching.*

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*A concomitant and supporting alteration in teaching would involve the widespread use of small seminar-like college classes. This change should eliminate any concern about technological unemployment among teachers generated by the expansion of taped lectures. It also should serve a policing function since instructors would be exposed to much greater immediate feedback and testing than is the case when the lecture format is primarily used.

It would not be necessary to require that institutions or organizations actually decide to utilize the taped lectures; they could be banked and advertised and still "count" as a contribution (after all, most published research appears to be read by a very few people). And, an individual's manner of instruction could be evaluated on the basis of his "tape." Thus, the adoption of a technological innovation might facilitate the redirection of college instructors' central concerns from research and publication to effective teaching.

Probably the best hope for a change, however, lies in changes in the training and hiring practices. The research universities now provide a large proportion of the faculty of teaching colleges. One quarter of the institutions awarding doctorates in 1958 gave three-quarters of the degrees.* These faculty members tend to be research minded, for they emulate their professors. However, their capacity to do research is apt to be limited, because those who are most able join, as a rule, the faculties of the graduate schools.

Among the changes which have been suggested to strengthen the teaching faculties are the following.

1. Issue a certificate of completion of all work except the dissertation, to encourage those less able to do research to go out early and teach and thus minimize the "research" norm. While it might be argued that such a degree constitutes a formal recognition of lowered aspiration, and as such would be avoided, the considerable number of college faculty with

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*Bernard Berelson, Graduate Education in The United States (New York: McGraw-Hill Book Co., Inc., 1960), p. 94.

M.A.s and "further graduate work" listed in college catalogs,[*] and the occurrence of individuals with "all but dissertation,"--*the ABD's*--in listings of professional job applicants suggests the practical utility and probable eventual general recognition of such a specialized teaching degree. Yale,[*] the University of Michigan,[*] and the University of Toronto[**] have already begun granting such degrees.

The general adoption of such a "teaching" degree would also facilitate the process of awarding a reduced number of research degrees. One means of democratically selecting future researchers and future teachers would be to enforce markedly stricter standards as to what is acceptable as "original research" for Ph.D. dissertations. Such a procedure would filter out individuals who would probably do little research after receiving their doctorate primarily by anticipatory selection--knowing that fairly rigorous standards are enforced, more individuals would opt for a teaching degree rather than a research degree.

2. Provide some training in teaching methods in graduate schools. (This is problematic as there is little evidence that teaching can be significantly improved in that way.) Suggestions in this area frequently call for changes both in the status of, and supervision over, graduate

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[*] *Ibid.*, p. 171.

[*] *The New York Times*, December 28, 1969.

[*] *The Wall Street Journal*, October 8, 1969.

[**] Everett Walters, ed., *Graduate Education Today* (Washington: American Council on Education, 1965), p. 61.

teaching assistants, and the provision of more assistance and guidance to the newly employed college instructor during his first term or two.*

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*For a variety of viewpoints on the problem see Calvin B. T. Lee, op. cit., pp. 77-97.

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3. Evaluate teaching experience gained in graduate school or national service and make the results available to colleges which seek to hire a person. (This would not only help colleges gain the kind of faculty they need, but would also encourage those faculty who are more teaching minded.)

4. Hire more faculty from the less research oriented universities.

As for the major universities, first of all, the research burden can and should be lightened by moving some of it off campus. One criteria which can be applied may be derived from the Research and Development continuum. The closer we move toward the "D" (development) side, the less suitable to academia the work tends to be, although there are significant exceptions. Basic research is chiefly work of the mind, while development contracts often entail improving technological models as the last step before mass production, work best carried out by the private sector, government laboratories, or research corporations, but not on the campus.

It has been estimated that two-thirds of the research and development funds supplied by the Federal Government to higher education in 1960 were devoted to research and other nondevelopment purposes.* Thus up to

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*Kenneth W. Thompson, "Science and Public Policy: Guides from Abroad," Boyd R. Keenan, ed., Science and the University (New York: Columbia University Press, 1966), p. 31.

33 per cent of the R & D funds channeled into higher education may have been devoted to development work. Hence, if, let us say, 80 per cent of the development work would be moved off campus the threat of R & D teaching would be reduced by 26 per cent. This is of additional importance because development tends more often to be "classified" than research, and classified work conflicts with the traditions and needs of academia.

Furthermore, academic development work tends to develop its own units, such as the Applied Electronic Lab at Stanford, the Hudson Laboratories at Columbia University, the Aeronautical Laboratories at Cornell, and "I" lab at MIT. These complexes usually do not mesh well with the university proper and tend to form islands within (or next to) the campus where different modes of conduct, ideals and patterns of authority prevail, often in conflict with the "rest" of the campus. Their separate organizations and patterns also make it relatively easy to "ditch" these units as they are not deeply woven into the campus but are already set apart; quite frequently they are even physically separate.

Again, we are not suggesting here a radical new departure. During recent years, under the pressure of the student rebellion, and with the increased concern about the quality of teaching, universities have already begun to discard such units. In fact, many of the units listed above have already been partially or fully separated from their parent universities to the satisfaction, it seems, of both sides. For example, on May 13, 1969 the trustees of Stanford University announced their decision to sever ties of 23 years between the university and the Stanford Research Institute.*

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*The New York Times, May 13, 1969.

Previously the Stanford trustees had selected the board of directors of the research institute. However, the institute operated with its own staff of 1,500 professionals, most of whom had opposed closer ties to the university. The trustees' decision seems to have been prompted by the rising controversy on the campus over the institute's war-related research.

Similarly, in September of 1968 it was announced the Cornell University would sever its 22 year relationship with its Aeronautical Laboratory.* This action was taken after faculty groups objected to the nature of the research being done at the laboratory; two-thirds of its contract volume of $32 million a year came from the DOD and about one-half of that was classified research. While the New York State Government has been legally contesting Cornell's right to sell the laboratory, the university has slowly been proceeding with the sale. On October 15, 1969 Cornell was reported to have signed a contract for the sale of the laboratory, subject to the lifting of a temporary injunction on the sale.*

Finally, Hudson Laboratories, a 350-man oceanographic research institute, associated with Columbia University and supported by the United States Office of Naval Research, was closed on June 30, 1969. While the Navy explained that it now has the in-house expertise to provide its own research, it seems likely that the move was prompted, at least in part, by controversy over war-related research occurring on the Columbia campus.

The Federal Government should encourage this trend rather than fight it. It has critical leverage here. A review of granting and

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*The New York Times, September 20, 1968.

*The New York Times, October 15, 1969.

contracting legislation and procedure, from DOD (which finances the campus-penetrating IDA) to NSF (which makes grants almost exclusively to universities) is urgently needed with this issue in mind.

"Applied" research, geared to a client's needs but involving work with symbols rather than with hardware, falls between basic research and development in terms of suitability to the campus. While the client's needs for knowledge rarely require discovering more of the laws of nature or of society, since he seeks to use laws already available, this still poses less of a problem than development work because some "truth" is discovered as application is explored. Applied work increases factual knowledge as well as creating opportunities for student training. The main problem with such work is that the client's partisan nature and the pressure of time tend to prevent "honest" research. The main point for us is that while teaching needs to be balanced against basic research within each campus and system-wide, there is less reason to require teaching to compete with applied research. Hence, much of the applied research now conducted on campuses, especially the more routine parts, should be moved off the campus.

The nation's R & D needs would not suffer in the process. On the contrary, the campus tends to "Robin Hood" research while what the nation needs is research units more closely aligned with mission agencies. This can be achieved more readily with places like RAND, the Urban Institute, or the Bureau of Social Science Research, than with campus-based professors and departments, or even "centers." While some of the new fly-by-night, small scale research corporations are clearly inferior to even most campus work, and deserve to be ignored, their share of the work may be turned to the research groups who will then grow in size and quality. Bell Labs, Stanford Research Institute, and RAND provide successful models. For reasons which can not be explored here, it seems that the larger scale, well financed, secure in the future, interdisciplinary units are the most successful ones while, on the average, the smaller ones are less so. Hence, more support should be funneled to such units rather than spent to encourage proliferation.

All this will relieve academia from the excessive R & D baggage it has acquired over the last 15 years. There will remain the research oriented graduate schools and the professional schools (e.g., medicine, engineering), with their respective research divisions. We refer to these new institutions as research universities (in contrast to teaching colleges) in order to stress that the graduate schools should be reconstructed so that they are no longer viewed as remnants of medieval scholasticism but as academic institutions in which basic research is the major function.

Training would be provided in the research universities as a secondary function. It would take place mainly through apprenticeships and independent study rather than through conventional courses presented in lecture halls. This procedure is already gaining favor in the natural sciences, in the social sciences, and is even becoming increasingly prevalent in some of the humanities (for example, in association with the increased use of computers in history and linquistics). "Teaching" in the conventional sense is no longer the main reason the professor is at the graduate school; the main factor is the way the student is trained. This is most clearly indicated by the time distribution patterns with the students mainly preparing their course work much as they had during their previous high school and college training, while the faculty is primarily engaged in ongoing research. Open acknowledgement of this "latent" structure of research primacy will drive out a few faculty and some graduate students, but it will also considerably reduce the strain and frustrations which result from the unrealistic idea that the graduate faculty can be centrally devoted to the teaching of conventional courses, as in high school or college.

Even more significantly, such an acknowledgement will open the door to the institutional reorganization of universities along lines suggested by the requirements of research. The research university may be divided into units according to research problem areas (e.g., the Urban School) or techniques (e.g., the use of simulation models) rather than into traditional departments by academic subjects.

The separation of the research oriented graduate school from the teaching college would also be facilitated by a more even distribution of financial support for research, both within and among fields. In general, those fields whose graduate faculty most resembles the faculty of a research university--in that their primary concentration is on the conduct of research and the training of researchers--are those fields receiving the largest shares of the available support for research, in particular, the natural sciences and some of the social sciences (particularly certain specialities in economics and psychology).* It has been observed that "a department could afford to abandon its undergraduate program only if it had ample grants, contracts, or endowments to support its professors."*

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*Harold Orlans, The Effects of Federal Programs on Higher Education (Washington: The Brookings Institution, 1962), p. 95.

*Christopher Jencks and David Riesman, The Academic Revolution (New York: Doubleday and Co., 1968), p. 246.

Since support for research is relatively scarce in many areas of the social sciences and humanities, and support for basic research is often difficult to obtain even in the comparatively well-financed natural sciences, the development of a research university, specifically devoted to conducting basic research in most contemporary academic disciplines, would very likely require the creation of new, less project-specific, patterns of financing academic research. It seems possible, however, that the restructuring of graduate research in terms of broad public problems rather than academic departments might attract such support.

Above all, the research university should be more--although not completely--separate from the teaching college. This is already achieved to a large degree, because most of the graduate faculty do not teach undergraduates. At many universities they are organized in separate units and frequently located at separate places. For instance, at Columbia University there is a graduate faculty of Arts and Sciences separate from the College (undergraduate boys) and Barnard (undergraduate girls), with each situated on a different part of the campus.

There are constant pressures to reduce the barrier between the undergraduate college and the graduate schools when those are on the same campus. On the one hand, full time academic researchers, who often lack many of the benefits of full faculty status, tend to seek appointment to a university's instructional staff, and on the other hand, the faculty members instructing undergraduates often conduct research hoping for eventual appointment to a graduate faculty. This situation should be responded to, not by facilitating interinstitutional migration in general, but by allowing relatively easy reassignment from research to teaching institutions, but not vice-versa, and by preventing the "joint" appointments to graduate and undergraduate faculties which are common now because they are used as means of "transportation" from one division (usually the undergraduate instructional) into another (the graduate, research oriented ones) by those actually better qualified to teach (which is one reason they were not originally appointed to a graduate division.) The "management" and standards of the two institutions should be even more separate so that the graduate school will not be able to use the teaching college to put its junior research staff on the payroll. The standards governing appointment to, and advancement within, a graduate or undergraduate institution should be clearly recognized as distinct and nontransferable. College instructors should be selected for, and evaluated in terms of their effectiveness as teachers. Those who show a talent and primary orientation toward research should be allowed to transfer out. They would go to the graduate school if the school wishes to have them; if not, their contract merely would not be extended. Once it becomes generally recognized that an appointment to an undergraduate college is not an avenue to a graduate position, those who do not seek teaching as a prime career will not seek employment there. When the number of those on the college faculty who are centrally committed to teaching rises, independent norms will arise which will, in turn, aid in the differentiation of a distinct identity and systems of rewards based on excellience in teaching.

The pressure to use the undergraduate college as a training ground for researchers would be lessened if the graduate universities would fully legitimize basic research by creating research professorships, and full-time research career patterns (assistant professors to full professors of research), and thus equalize the honors and privileges available to the instructional and research staffs. Presently, full-time researchers, in most instances, are second class citizens on the campus, without the right to vote, tenure, some of the fringe benefits, etc. No wonder they are often pushed into teaching positions.

Overall then, what has been suggested has been basically a process of differentiation: the clarification of the complementary but still quite distinct missions of three knowledge-processing institutions, associated with some structural alterations to free these institutions' resources for a more direct pursuit of their primary functions. Teaching colleges, by hiring and evaluating their faculty on the basis of their effectiveness as teachers, rather than as part-time researchers, are expected to become more effective educational institutions. Research universities, no longer divided between two patterns of instruction, may be expected to perform more effectively both in conducting basic research and in training researchers. The movement of a significant part of developmental and applied research institutes off campus may be expected to reduce disruptive clashes with academic values and facilitate the development of closer relations between the institutes and the agencies sponsoring their research. Finally, the association of these institutions in academic "cities" will permit all three types to continue to benefit from the cross-fertilization of ideas and sharing of facilities.